Operation Manual

FT1020G3

Rev 2.0

For Software V2.0.X

FT1020G3

Fire alarm system

MA430 **April 2013**

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1 Introduction

1.1 Overview

FT1020G3 Operation Manual is a document intended to be used by the end-user and the fire brigade personnel as well as service / commissioning engineers.

Due to continual development and improvement, different S/W versions are to be found. This document is valid for software (firmware) **version 2.0.x**. On the date / rev date of this document x = 0.

The software version is the firmware downloaded in to the control unit via PC windows based software. The latest software is factory downloaded in the control unit before delivery however, new software may be upgraded to a new revision on site.

The software version is dependent on the country where the control panel to be installed, that is due to the variations in the standard in each country. Two separate software versions are available, Australian (AU) and New Zealand (NZ).

The PC software is a windows based software to be installed in your PC, it's called **EBLWin** and must have a version number similar to the software (firmeware) version number i.e. version 2.0.x. The **EBLWin** is used to download the firmware and the Site Specific Data (SSD) into the control unit.

Only the first two digits must be the same in the software and the **EBLWin** version number i.e. 2.0.x (x = minor modifications).

1.2 Definitions

Definitions and abbreviations are used frequently in this document and shown in the following sections.

1.2.1 Alarm points

Units, which can generate a fire alarm (in the control unit), i.e. analogue detectors (sensors), conventional detectors, manual call points, COM loop modules, etc.

1.2.2 Smoke detector

Analogue and conventional photoelectric (optical) smoke detectors are available.

Sensor

1.2.3 Analogue detector (sensors)

Contains an A/D - converter. The **C**ontrol **U**nit picks up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made in the C.I.E. Analogue detectors are addressable, an address setting tool 4314 / 4414 is used to set up the addresses.

An analogue detector has to be plugged in an analogue sensor base (**ASB**).

1.2.4 Analogue detector (Sensor) Base (ASB)

A sensor is plugged in an ASB, which is connected to a COM loop (see below).

1.2.5 Conventional detector

Detector with only two status, either normal or fire alarm. A conventional detector in alarm simulates low resistance (560 Ohm) across the zone line input. Normally plugged in a conventional detector base **CDB** (see below) connected to a conventional zone line input, with an end-of-line device. Some types are connected directly on zone line.

1.2.6 Conventional Detector Base (CDB)

A conventional detector is plugged in a CDB, connected to a conventional zone line input.

1.2.7 Addressable

A unit with a built-in address device, i.e. each unit is individually identified, handled and indicated in the C.I.E.

(The unit can be an I/O unit with a zone line input, to which one or more conventional "alarm points" can be connected.)

1.2.8 Conventional zone line input / Detector circuit

Input intended for one or more conventional alarm points. End-of-line device in the last alarm point must be fitted.

1.2.9 Output unit

Addressable unit with programmable control outputs connected to a COM loop (see below).

1.2.10 Output / Control output

Defined or programmable function, relay clean contact output or voltage output (supervised / monitored) in the C.I.E. or an output unit connected to a COM loop.

1.2.11 Short circuit isolator (ISO)

Addressable unit for automatic disconnection of a part (segment) of a COM loop (see below) in case of a short circuit on the loop. One isolator is required per 40 devises on the COM loop.

1.2.12 Remote Display Unit (RDU)

The RDU is an addressable unit for fire alarm presentation (including user definable text messages, if programmed). Two types are normally used: Alarm presentation unit (APU) and alert annunciation unit (AAU)

1.2.13 COM loop

Loop = twisted pair cable, to which all the addressable units can be connected. Starts in the C.I.E. and it returns back to the C.I.E.

1.2.14 Control Unit / C.U. / C.I.E.

Control **U**nit = **C**ontrol and **I**ndicating **E**quipment = Unit to which the alarm points are connected (via a COM loop). Indicates on the front fire alarms, fault conditions, etc. A printer can also be included in the control unit.

1.2.15 Fire Brigade Panel (FBP)

The fire brigade panel is an integral part of the control unit intended for fire alarm, fault and disablement presentation, etc. The FBP compromises the top part of the front display.

1.2.16 Control panel (CP)

A part of the control unit intended for the building occupier, service personnel, etc., to "communicate" with the control unit / system. It compromises the bottom part of the front display.

1.2.17 System

One or more control units connected via a TLON network (co-operating control units).

1.2.18 LED

LED (**L**ight **E**mitting **D**iode) = Yellow, green or red optical indicator ("lamp").

1.2.19 External Indicator LED (RIL)

A unit with an LED, connected to an ASB, CDB or a detector with an output for an external LED.

Illuminates when the built-in LED in the detector is lit.

1.2.20 Display / LCD

LCD (**L**iquid **C**rystal **D**isplay) = Display (in the C.I.E. or Display unit) for presentation of fire alarms, fault messages, etc. In FT1020G3 it is a graphical monochrome LCD (320 x 240 dots) with backlight.

1.2.21 Door open

In FT1020G3 there is a door switch, which is activated when the control unit door is open.

When the door is open a message "Door is open in this unit" is shown in the LCD.

1.2.22 Site Specific Data (SSD)

The SSD is unique for each installation. All alarm points, presentation numbers, user definable text messages, programmable outputs, etc. are created in the PC program **EBL Win** and also downloaded in FT1020G3 unit(s) with **EBL Win**.

1.2.23 Software (S/W) / System program

The software (S/W) – also called Firmware and system program - makes the control unit (the microprocessor) work. It is factory downloaded but a new version can, via program **EBL Win** be downloaded in FT1020G3 on site.

1.2.24 Network / TLON® / LonWorks® / Echelon / Node / TLON Conn. board / Gateway / Sub net / Backbone net / Router / Repeater

Brief explanations to the words / expressions may be found in the relevant documents. See also separate TLON Technical description.

TLON® = TeleLarm Local Operating Network = a LonWorks®- based network for communication between several units / nodes. The protocol is LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a control unit to the network, a TLON connection board 5090 has to be plugged in the control unit. FT1020G3 also supports redundant TLON system communication. In this case two TLON connection boards have to be plugged in each control unit.

A network can be one channel (FTT-10) or several channels, connected via routers. (In the TLON Network a sub net = a channel.)

Routers are also used to increase the maximum cable length, node to node, in a network.

Router or Repeater is the same type of unit with different configuration to select either as a router or repeater.

Note: *routers are not required in a redundant TLON network however it can only be used to increase the network cable length between two nodes.*

Fibre optic routers are available to interface the TLON networking between control units via fibre optic cables. The type of fibre optic router is dependent on the cable type e.g. single or multi mode, distance between any two nodes, etc. Care must be taken when selecting the router type. Brooks recommends Westermo LRW-112 series of fibre optic routers.

The PC program "TLON Manager" (V2 or V1.2) must be used to configure the TLON network and create the number of control units in a system.

Note: *The TLON configuration must be performed prior creating the site specific data (SSD).*

2 Overview

2.1 The FT1020G3 system

FT1020G3 is a microprocessor controlled intelligent fire alarm system, intended for analogue addressable smoke detectors, as well as conventional detectors and manual call points. Programmable control outputs and output units are available. Up to 1020 addresses can be connected to each control unit (C.I.E.).

FT1020G3 is available in several types, versions and configurations. It can be connected to a TLON network, i.e. in a "system", with up to 30 control units. Each control unit has access to all information.

FT1020G3 is designed and assessed to the Australian Standard AS7240.2, AS7240.4 and NZS4512:2010. The Fire Brigade Panel controls are incorporated as part of the front fascia and conform to AS4438.3 - 2010.

2.1.1 Printer

The control unit FT1020G3 can be fitted with an optional printer.

2.1.2 Expansion boards

In the control unit (C.I.E.) it is possible to mount up to six expansion boards. The following types are available:

Product type no.	Product name
4580	8 zones expansion board
4581	8 relay outputs expansion board
4583	Inputs and outputs expansion board

For more information, see also the FT1020G3 Technical Manual and drawings.

2.1.3 Power supply

The primary power source is a switch mode power supply, 230V AC / 24V DC, 6.5 A 150 Watt).
The secondary power source is a backup battery (2 x 12V). In the standard enclosure, up to 17 Ah batteries can be fitted. Larger batteries (up to 65 Ah) requires additional battery box.
The batteries and the DC output of the switch mode power supply are connected to the Main board (5010) as shown in the block wiring diagram dwg. No. F725. The power supply and battery capacity must be sufficient to run the system as required by AS1670.2. See the FT1020G3 Technical Manual, chapter "Power supply" for more information.

2.2 S/W versions

Due to continual development and improvement, different S/W versions may be found. ***The same S/W version is required in all control units*** in a TLON Network. When installing a new control unit in a system with "older S/W" control units, you must

upgrade the S/W in the old control units with the current S/W or downgrade the new control panel software by downloading the same older S/W version in the new control unit.

2.3 Documents

The following documents are available:

- User Manual
- Operation manual (this document)
- Technical manual (planning instructions)[1]
- Block wiring diagrams
- Commissioning test document

Normally information found in one document may not be found in another document, i.e. the documents complement each other.

For TLON Network / TLON Manager, Web server, etc, separate documents are available.

2.4 Applications

The FT1020G3 system is intended for small, medium and large installations. The intelligent control units offer the system designer and end user a technically sophisticated range of facilities and functions. Programming (PC programs EBLWin, TLON Manager and EBL Web) and commissioning of the control unit / system is an easy process. Start with one control unit and then, when required, add more units. The TLON network allows the installer to install the control units in one building or in different buildings.

2.5 PC programs

The following PC programs are used together with the FT1020G3 system.

2.5.1 EBLWin

The PC program **EBLWin** is used for programming and commissioning of one or more control units i.e. to:

- Auto-generate, i.e. to identify the units connected on a COM loop and create default settings, which can be edited, saved and used as a site specific data (SSD).
- Create and download / backup (upload) of site specific data (SSD)
- Download new software (firmware), settings, conventions, configurations, control unit & system properties, etc.
- Create / download the user definable text messages (alarm texts) shown in the display in the C.U. and Display units.
- See alarms, faults, disablements and acknowledge or reset them.

EBLWin must have the same version number as the **EBL512G3** S/W version number e.g. **2.0**.x and **2.0**.x respectively (x indicates only a small correction and is not required

[1] On the date of printing this manual, the help tap in EBLWin contains the Panasonic planning instructions.

to be the same). Old SSD files can be opened in a newer (higher) version of **EBLWin**, then edited, saved and thereafter downloaded to FT1020G3 control units with the corresponding version.

2.5.2 TLON Manager

The PC program **TLON Manager** is used for the TLON Network programming, installation, etc. (TLON Manager 1.2 and TLON Manager 2.0 can be used.)

2.5.3 EBLWeb Config tool

The PC program **EBLWeb Config tool** is used for configuration of the Web-server II (1598)

3 Control Unit

3.1 FT1020G3 Specifications

Table 1 Control unit specifications

Item	Specifications
Mains Voltage	230V AC (176-264), 1.6A
System Voltage	24V DC
Current Consumption	Depends on no. of expansion board, external equipment, type of loop devices, etc.[2].
Ambient Temperature (ºC)	Operating 0 to + 40, Storage -40 to +70
Ambient humidity (%RH)	Maximum 90, non-condensing
Size (mm)	Standard cabinet 920H x 450W x 210D (with metal door closed)[3]
Enclosure Material	1.5 Zinc anneal steel
Enclosure Colour	Oyster, ripple finish
Approvals	AS7240.2, AS7240.4 and AS4428.3:2010
Standard Inputs / Outputs[4]	Four COM loops (0-3), each loop can connect up to 255 devices
	Four programmable Supervised voltage outputs, 1 Amp each
	Two programmable relay outputs, contact rating 2 Amp
	Four programmable clean contact (N/O or N/C) inputs (I0-I3)[5]
	Two non-programmable relay outputs for ASE (fire & fault)
	Six x 24V outputs for Web server, ASE, remote display units, external applications 2-4 Amp.
Expansion Boards	Max. 6 of 4580, 4581 or 4583 (only 2 x 4583 allowed)[6]
I/O Matrix 4582 board	Max. 24, 6 per COM loop if no expansion boards on Loop 0[7] fitted. Up to 6 modules can be used as zone or generic + 18 Fan control modules (4 fans per module)[8]

[2] Refer to the technical manual and the current calculation spread sheet.
[3] Medium size enclosure 630H x 450W x 210D can be used if the options are very limited. A combination of large and medium enclosures can be used to fit more options. In 19" rack cabinets, a series of different face plates are also available.
[4] Refer to G3 block wiring diagram, drawing no. F765
[5] First input I0 cannot be used in NZ convention, only 3 programmable inputs are available.
[6] Expansion boards are internally connected to COM loop 0, ensure total number of expansion boards and I/O matrix boards connected to COM loop 0 does not exceed 6.
[7] Reduce the number of 4582 connected to COM loop 0 by one for every expansion board used.
[8] If no expansion boards fitted, up to 24 fan control modules can be used i.e. 96 individual fans

3.2 FT1020G3 Limitations

Table 2 Control unit limitations

Item	C.I.E.	Network System
General fire alarm via programmable input	100	
External fault via programable input	50	30 x 50
Programmable outputs (= control expressions)[9]	512	
Technical warnings	50	30 x 50
Addressable 2 voltage outputs unit 3364	40	
Interlocking Combinations	400	4000[10]
Presentation numbers / alarm points[11] that can be presented in the display(s) in case of fire alarm	512	512
Presentation numbers[8] that can be programmed	512	30 x 512 = 15 360
Zones that can be programmed	512[12]	999
Faults		300
Disabled zones		512
Disabled alarm points (zone/address) + Disabled COM loops		200[13]
Disabled outputs		200[14]
Disabled interlocking outputs		200[15]
Sensors activating SERVICE signal		200
AAF zones (Max. 5 detectors per AAF zone.)[16]	100	
Total number of expansion boards 4580, 4581 and 4583	6	180
Number of I/O matrix boards 4582[17]	24	720

[9] Approx. 4000 trigger conditions can be used in these control expressions.
[10] Max. 100 user definable texts can be displayed "at the same time".
[11] Presentation number is a ZONE only or ZONE – ADDRESS.
[12] Any zone number between 001 and 999 can be used for the 512 zones.
[13] Zone/address disabled via time channel not included.
[14] Control outputs disabled via menu H2/B2 and Alarm devices disabled via menu H2/B4 are not included.
[15] Interlocking outputs disabled via menu H9/C1 are not included.
[16] Used in conjunction with the Alarm Acknowledgement Module (AAM).
[17] Reduce no. of 4582 boards by one for every expansion board used (4580, 4581 or 4583).

3.3 Control Unit Layout

Figure 1 FT1020G3 Control Unit with printer and options

The appearance and functions of FT1020G3 may vary depending on the convention e.g. AU or NZ and the number of fitted options.

Figure 1 above shows the standard FT1020G3 in large cabinet fitted with some options e.g. printer, Occupant Warning System, zone control module and AS1668 fan control module.

NOTE: *Special hardware is required to add the options.*

The FT1020G3 control and indicating equipment (CIE) shown in Figure 1 is housed in a powder coated metal cabinet, colour is oyster. The cabinet has an inner and outer door. The outer door is fitted with a 003 key to provide access level 1 and is made of tinted high impact plastic and allows easy viewing of all indicators and controls. The look of the control unit might vary based on the number of fitted options, cabinet size, etc.

Access to the inner door is gained by opening the outer door which then provides access to the inner door fixing screws. Opening the inner door allows access to the control unit hardware for the purpose of maintenance or servicing.

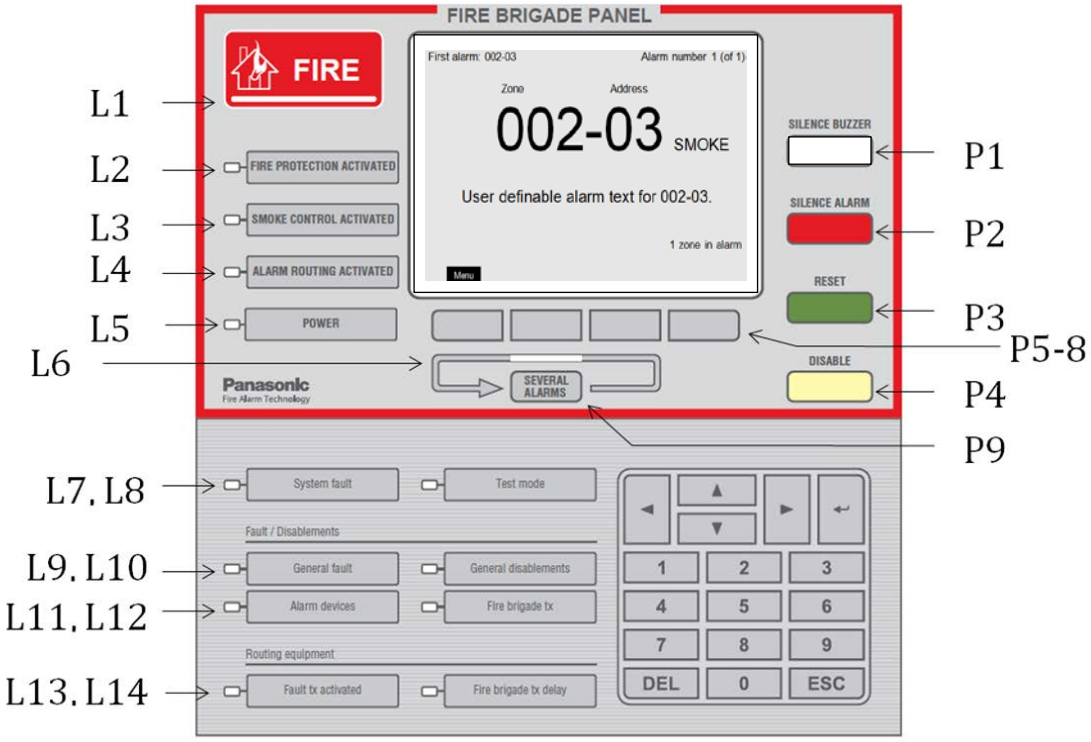


Figure 2 FT1020G3 with front and display

The fire brigade or fire services personnel use the integrated **FBP** to see which alarm point / zone(s) have activated a fire alarm and take the required operational control of the system. Fire brigade personnel can control active alarms via the buttons and keys P1-P9 within the FBP. In the graphical display, the information displayed in the upper part is dependent on how many alarm points / zones having generated a fire alarm. In the middle part, the fire alarms will be shown, i.e. one alarm point or one zone together with a user definable alarm text (if programmed) plus some other information.

The **CP** is used to "communicate" with the system, i.e. for commissioning, monthly tests, maintenance, etc. Access codes for different access levels are required. To get access to the system (a menu tree with main and sub menus) and for operational control of the system, up to ten **User names** can be used for three different **User level types**. A **Password** (six digits) for each User name is required.[18]

3.4 LED indicators and push buttons

LEDs and push buttons can vary according to type and configuration (convention / country).

See also Figure 2.

[18] The same User names and Passwords (for the different user levels) will be used for logon to the Web-server.

Table 3 LED indicators on Fire Brigade Panel (FBP)

LED indicator		Indicating
L1	**FIRE** (5 red)	Fire alarms (see below) Quiet alarm See also chapter "Alarm types", page 47.
L2	**FIRE PROTECTION ACTIVATED** (red)	Output(s) for extinguishing (suppression) equipment activated. (Or a programmable input type "Extinguishing" is activated.)
L3	**SMOKE CONTROL ACTIVATED** (yellow)	Output(s) for fire / smoke ventilation equipment activated (fire fan). Or a programmable input type "Ventilation" is activated.
L4	**ALARM ROUTING ACTIVATED** (red)	Output "Fire alarm" for fire brigade TX (routing equipment) and/or corresponding programmable output(s) of type "Routing equipment") is/are activated (or a programmable input type "Activated routing equipment" is activated.)
		Test of routing equipment in progress (see menu H1).
L5	**POWER** (green)	The C.I.E. is powered via the primary power supply and/or the battery.
L6	**SEVERAL ALARMS** (2 red)	More than one unit / zone have activated fire alarm. Use push button "SEVERAL ALARMS" (P9) to scroll amongst the alarm points (zone-address) or soft key "Next zone" (P6) to scroll amongst the zones.

Different types of Fire alarms as follow:

- Fire alarm (including test mode alarm)
- Heavy smoke/heat alarm
- Alert Annunciation (AA) alarm
- Acknowledged alarm (New Zealand only)
- Isolated alarm (New Zealand only)

Table 4 Push buttons on Fire Brigade Panel (FBP)

Push button		Operation/function
P1	**SILENCE BUZZER** (white)	Used to silence the buzzer in the C.I.E. when it is sounding
P2	**SILENCE ALARM** (red)	Used to silence alarm devices e.g. OWS / sounders[19] in the building when they sound. Silenced Alarm devices is indicated to the right in the display's soft key area (a symbol near this button), see page 29
P3	**RESET** (green)	Used to reset: • Fire alarms (see below) • Co-incidence alarms (if not automatically reset), for more information see "Fire alarm reset", page 58. NOTE! P3 has to be pressed for > 0.5 sec.
P4	**DISABLE** (yellow)	Used to disable active alarm(s), all outputs of the device or zone in alarm will be disabled.
P5 - P8	**Soft keys** (grey)	The operation/function is shown above the key in the display (i.e. the soft key area). The function of a soft key may vary depending on the situation. If nothing is shown above the key in the display, the key has no function at this moment[20].
P9	**SEVERAL ALARMS** (grey)	Used when LEDs "SEVERAL ALARMS" (L6) are lit to scroll / browse through the several alarm points (zone-address). For more details, see chapter "Fire alarm" page 48, under LEDs "SEVERAL ALARMS". NOTE! To scroll/browse through the queued zones, use the soft key "Next zone" (P5).

Different types of Fire alarms as follow:

- Fire alarm (including test mode alarm)
- Heavy smoke/heat alarm
- Alert Annunciation (AA) alarm
- Acknowledged alarm (New Zealand only)
- Isolated alarm (New Zealand only)

Encapsulated reset (auto disablement): Press "RESET" (P3) and approx. 0.1 sec. later also press "SEVERAL ALARMS" (P9). See also page 59. This function must not be used in the Australian convention.

Multiple reset (when single reset is selected), press “RESET” (P3) and approx.. 0.1 sec. later, press also "↲" (Enter).

[19] Outputs of type "Alarm devices" will be de-activated.

[20] The soft key “P8” has the function Alert Annunciation Acknowledge.

Table 5 LED indicator on Control Panel (CP)

LED indicator		Indicating
L7	**System fault** (yellow)	FT1020G3 is not running because of S/W, CPU or memory fault, no contact between main board and MMI board or C.I.E. restart (fault code ≠ 00 / 03).
L8	**Test mode** (yellow)	One or more zones are in "test mode", see page 96 and 134.
	Fault / Disablements	
L9	**General fault** (yellow)	Fault(s) in the system, i.e. not acknowledged fault(s) and/or not corrected fault(s). See also page 132.
L10	**General disablements** (yellow)	Disablement(s) in the system. Also valid for "Single reset with automatic disablement", see page 59.
L11	**Alarm devices** (yellow)	**Steady**: Output(s) type "Alarm devices" is disabled. **Blinking**: One or more supervised outputs type "Alarm devices" have generated fault(s). This is also valid when the C.I.E. has no "contact" with a unit with such an output, e.g. 3377, 3379, 3364, etc.
L12	**Fire brigade TX** (yellow)	**Steady**: Output(s) for "Routing equipment" disabled via menu (H2/B5) or via open door. **Blinking**: Routing equipment power supply output[21] or one or more supervised outputs (of type "Routing equipment" have generated fault(s). This is also valid when the C.I.E. has no "contact" with a unit with such an output, e.g. 3361, etc.
	Routing equipment	
L13	Fault TX activated (yellow)	One or more not acknowledged faults[22]. Output "Fault condition" for fault TX (routing equipment) is activated.
		Test of routing equipment in progress (see menu H1).
		Sensitive fault detection mode (see menu H5/A2) is on.
L14	Fire brigade TX delay (yellow)	The **A**lert **A**nnunciation function is enabled, i.e. time channel controlling this function is "on". The **AA** function is described in the FT1020G3 Technical Manual, chapter "Alert Annunciation". LED "L14" will be "on" if the **AA** function is enabled for at least one alarm point / zone. Normally one only time channel is used for this function but two or more channels can also be used. As an alternative, the **AA** function can be continuously "on".

Note: *Acknowledged alarm and isolated alarm are used only in the NZ convention.*

[21] Main board 5010 term. block "J3:3-4", fuse F8 (T500mA L 250 V – TR5).

[22] See also chapter “Fault acknowledge”, Page 77

Table 6 Push buttons / keypad on Control Panel (CP)

Key/push button		Operation/function
	↵(Enter)	Used to log on, i.e. to get access to the menu tree (via an access code) and to accept a menu and accept input of data. Also used by fault signal and service signal to acknowledge the selected fault / analogue smoke detector.
	◄ ► ▲ ▼	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.
	1 – 9 and 0	Numeric key pad for the digits 0-9. Can be used to input data and in the menu system to jump to a menu with a corresponding number (e.g. 5 for a jump to menu H5).
	DEL	Used to clear /delete all visible entry fields.
	ESC	Used to stop input of data or to step "one step up" in the menu system (e.g. from a sub menu to the main menu). ***NOTE:*** *The soft key "Escape menu" (P5) is used to leave the menu system.*

4 Control Unit Options

4.1 Occupant Warning System (OWS)

The standard Brooks OWS display and control layout is shown in *Figure 3*. For more details, refer to the standalone OWS manual MA380 or OWS kit manual MA385.

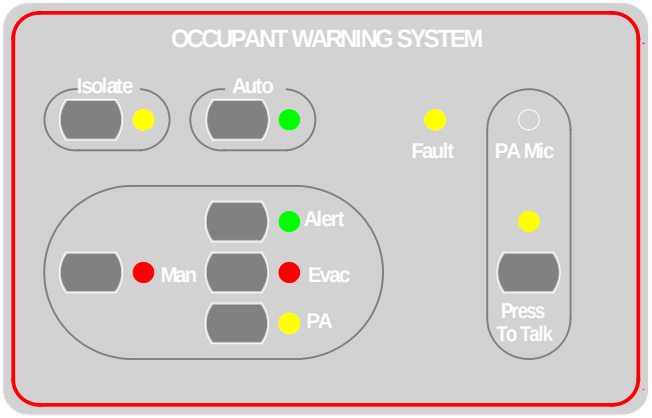


Figure 3 Occupant Warning System display

Brooks occupant warning system is a single zone system designed to warn the occupant to evacuate the building in the event of fire or emergency.

The OWS comprises of amplifier, control / indication front and speakers / strobes distributed within the building to provide audible and visual warning to the occupant as well as PA notifications. In addition to the T3 and AS2220 tones, the OWS provides in its standard configuration alert and evacuation messages as well as electret microphone for PA purposes.

Brooks OWS can be incorporated in FT1020G3 system inside the same cabinet. It provides high quality audio output utilising high efficiency class D amplifier, sizes available: 60W, 120W and 250W.

Features:

- Selectable time delay between alert tone / message and evacuation tone / message.
- Auxiliary input to connect to single or multiple zone remote microphone.
- Supervised speaker circuit, trigger input and strobe output.
- Optional up to 16 PA speaker zone controls. Each speaker zone is individually monitored for short-circuit and open-circuit conditions
- OWS fault changeover relay output to report a fault condition in the FT1020G3
- Powered from the CIE power supply for 60W version, larger size amplifiers require separate power supply and PSU supervision module.
- Fault condition is generated when the OWS is left in isolate or manual mode for more than 5 minutes.

Table 7 OWS controls and indications

LED indicators & Buttons		Indicating
Auto	LED - Green	Illuminates to indicate the “Auto” position of the button, normal position.
	Button	OWS controlled only by alarm condition
Isolate	LED - Yellow	Illuminates to indicate “Isolate” position of the button.
	Button	Disable all outputs to the speakers, C.I.E. fault is generated if the isolate button remains active for more than 5 minutes
Manual	LED – Red	Illuminates to indicate the “Manual” position
	Button	Enables manual activation of Alert, Evac or PA. OWS fault is generated if the manual button remains active for more than 5 min.
Alert	LED – Green	Indicates that alert tone/message is active
	Button	Manual trigger of the alert tone/message
Evac	LED - Red	Indicates that evacuation tone/message is active
	Button	Manual trigger of the evacuation tone/message
PA	LED - Yellow	Indicates that PA is enabled
	Button	Enables PA mode
Press to Talk	LED - Yellow	Indicates PA is broadcasting
	Button	Press and hold to broadcast via the electret mic
Fault	Yellow	Indicates common fault in OWS i.e. speaker fault, trigger fault, strobe fault, etc.

4.2 Gaseous extinguishing system control module

4.2.1 Overview

The gaseous extinguishing system control module is provided for use as an option in FT1020G3. The module is comprised of the following:

- Control Board (SUB928), software is configured to interface with C.I.E.
- Display Board (SUB929)
- CIE interface board (SUB943).
- Front panel decal with interconnection cable

In addition to the control module, system ancillaries will include:

- A combination of Brooks Warning Signs
- Brooks Local Control Station (LCS)
- Voice / Tone Electronic Sounder
- Dual Strobe Module

The control module combined with other Brooks system components has been designed to provide the monitoring and control functions of a complete gaseous extinguishing system that meets the requirements of the relevant clauses 7.1 to 7.6 of the Australian Standard AS4214-2002 (including amendment 1). For more details, refer to FT2GAS Operation / technical manual MA400.

The control module has the following inputs / outputs:

- Fully supervised input circuits e.g. gas lock-off valve input, manual release input and gas discharged sensor input.
- Fully supervised system inoperative warning sign 24V output rated @ 0.5A maximum.
- Fully supervised 2 wire system output for level 1 and level 2 alarm to Brooks warning signs (alarm 1 [+/-] & alarm 2 [-/+]) rated @ 3A maximum.
- Fully supervised gas release output rated @ 5A maximum.
- Gas release clean-contact relay output rated @ 2A maximum.
- Gas Fault clean-contact relay output rated @ 2A maximum.
- Gas Isolate clean-contact relay output rated @ 2A maximum.
- One four-wire Local Control Station (LCS) interface. Both the local gas isolate control and the local gas release control are fully supervised for open and short circuit faults.
- Adjustable gas release timer settings via a built-in DIP switch.

Note: *the current rating above is the maximum current capacity of the outputs, a power supply calculations must be performed to ensure that the power supply capacity is sufficient to run the system in full alarm condition without exceeding the maximum current rating of the power supply.*

4.2.2 Display board (SUB929) & decal

The display board (SUB929) and decal layout is shown in Figure 4 on page 25.

All LED indicators on the front display are covered by a polycarbonate decal clearly labeled with their functions.

When the system sets in the normal condition, all LED indicators will be extinguished.

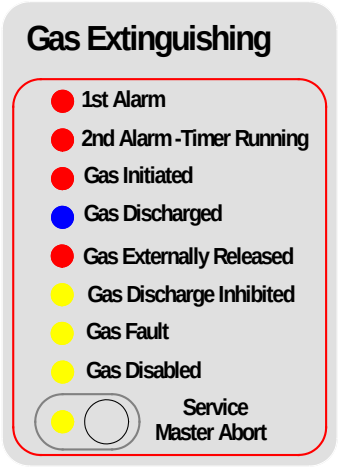


Figure 4 Gas Extinguishing Display Layout

The gaseous extinguishing system status indicating LEDs and flash patterns are described in the following table. The default state of the LED indicators is OFF, if it is not defined below.

Table 8 Gas Front Status LED Indication and flash Pattern

Type	LED Name	Module Conditions	LED Pattern
Alarm	1st Alarm	One zone or zone address in alarm	Fast Flash
	2nd Alarm – Timer Running	Both zones or zone addresses in alarm	
	Gas Initiated	Gas release output activated	
	Gas Externally Released	External gas release control activated	
	Gas Discharged	Gas discharged sensor input activated	
Fault	Gas Fault	Fault in any of the supervised inputs or outputs	Steady ON
Disable	Gas Discharge Inhibited	Gas discharge inhibited via LCS isolate switch	Steady ON
	Gas Discharge Disabled	Gas discharge disabled by the service master abort switch or the gas lock-off valve controls	
	Service Switch Active	Illuminates when the master abort switch is activated	
	Service, Master Abort	Gas service master abort switch	

4.2.3 Control board (SUB928)

The control board (SUB928KT) is mounted on top of the CIE interface board (SUB943), refer to *Figure 5* on page 26

The gas control board SUB928 provides all the gaseous extinguishing control functions. It provides the termination and supervision of all the field equipment.

4.2.4 CIE interface board (SUB943)

The CIE interface board (SUB943) is mounted at a suitable location inside FT1020G3 cabinet. It provides the required terminations to interface the control board SUB928 to FT1020G3. This includes zone alarm, Zone fault, zone isolate and gas release conditions.

Figure 5 Assembled Control & Interface Boards

4.2.5 Inputs from FT1020G3 to CIE interface board (SUB943)

The following inputs are provided in the gas interface board:

1. 24V supply (22-30V), 200mA to 3A based on system power calculation
2. Zone 1 & Zone 2 alarm, open clean alarm contact for each zone or zone address
3. Fault input, zone 1 fault, zone 2 fault or power supply fault in the CIE will activate the system inoperative sign. Fault input should be normally closed clean contact.
4. Zone Isolate input, if any of the two zone inputs or zone addresses used to release the gas is disabled (open contact), the system inoperative sign will activate.

4.2.6 Outputs from CIE interface board (SUB943) to FT1020G3

The following outputs from SUB943 are provided to indicate the gaseous extinguishing system status in FT102G3 via programmable inputs:

1. Gas isolate, relay output to indicate in FT1020G3 if the gas has been isolated.
2. Gas fault relay output to indicate in FT1020G3 if a fault exists in the gaseous extinguishing system.
3. Gas release relay output to indicate in FT1020G3 if the gas has been released.

4.3 1668 Fan control

The fan control module is designed to meet the requirements of AS1668.2. The front display is shown in Figure 6.

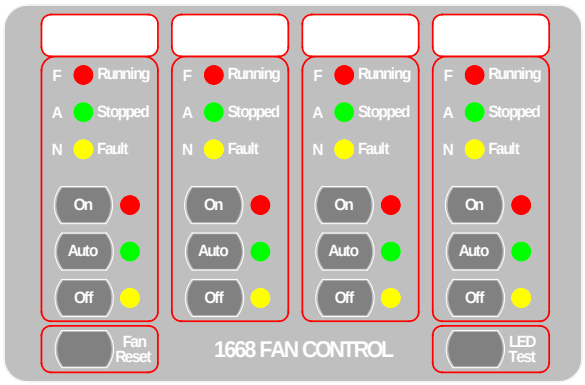


Figure 6 1668 Fire fan control

Each fan control module consists of an I/O matrix 4582 and display / control board (SUB902). Each module can control and indicate the status of up to 4 different fans. A fan reset switch is provided to independently reset the fan module. A remotely located (mechanical services) 3361 module is required for each fan and configured in the control panel using EBLWin.

Table 9 Indicators and buttons in 1668 module

LED indicator & buttons		Indicating
Running	Fan running - Red	Illuminates to indicate that the fan is running.
Stopped	Fan Stopped - Green	Illuminates to indicate that the fan is stopped.
Fault	Fan Fault - Yellow	Illuminates when the signal to the fan to change state is restored, either via manual override switch or by the C.I.E in Auto mode but the feedback signal confirming the change of state has not been received by 3361 input in the field within 30 seconds. Or There is an open circuit in the 3361 supervised input where the feedback from the pressure switch is connected. Or The pressure switch is playing up
On	LED – Red	Indicates “On” position of the button, manual override start up
	Button	Fan is running in manual mode independent of an alarm in C.I.E.
Auto	LED – Green	Indicates “Auto” position of the button, normal operation
	Button	Fan may be running or stopped depending on the alarm condition in the C.I.E
Off	LED - Yellow	Indicates “Off” position of the button, manual override stop
	Button	Fan is stopped in manual mode independent of an alarm in C.I.E.

4.4 Zone control module

The zone control module is used as a simple and easy method to disable individual zones for service and maintenance purposes as well as providing alarm and fault indication for these zones. The front display layout is shown in Figure 7

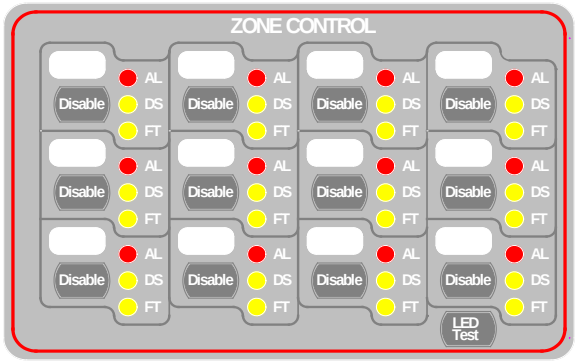


Figure 7 Zone disable and indications

Each zone control module consists of a universal I/O matrix 4582 and application board SUB900 specifically configured to provide up to 12 individual zone alarm and zone fault indicators as well as a disablement control with indicator to indicate switch activation. The module is normally mounted in the C.I.E. but it is also possible to connect the module externally via a COM loop.

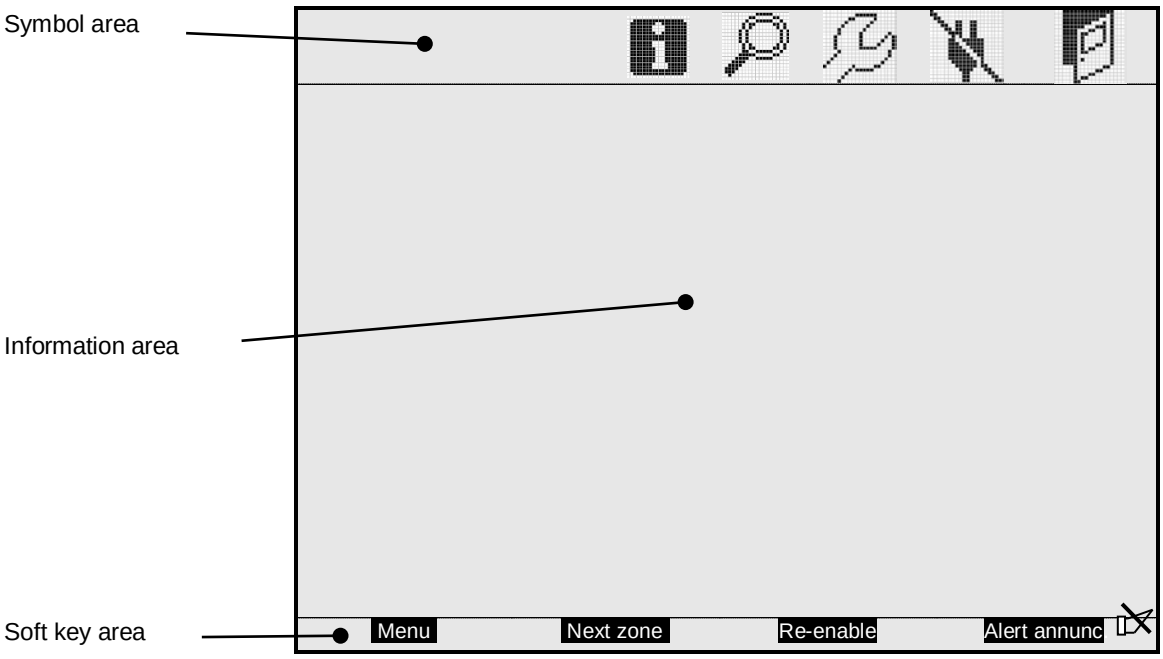
The Zone Control Module provides a simplified indication of zone status without the need for a liquid crystal display. The disable control allows a specific zone to be temporarily disabled without the need to access the CIE menu. This is typically used where building works or maintenance procedures are being carried out in a localised area of a building.

Table 10 Zone control LEDs and Buttons

LED indicator & buttons		Indicating
AL	Alarm – Red 1-12	Illuminates when an alarm from a conventional zone or an addressable device or group of addressable devices designated as a zone enters an alarm state.
DS	Disable - Yellow 1-12	Illuminates when a zone is disabled either by the disable switch on the zone control card or where the zone is disabled via menu H2/B1
FT	Fault – Yellow 1-12	Illuminates when either a short circuit or open circuit fault on conventional zone or any fault that prevents an addressable alarm point in a designated zone to operate properly.
Disable	Button 1-12	Pressing the disable switch will disable the specific zone selected. Pressing the switch a second time will re-enable the zone. Functions same as menu H2/B1.
LED Test	Button	Is selectable to either be activated from the CIE or at the zone control module itself, this feature can be utilised when the module is mounted externally via the COM loop.

5 The display (LCD)

5.1 Areas in the display



The display is divided into three areas:

- **The symbol area:** Some events are indicated with symbols, see Table 11 below.
- **The information area:** General area for all other information and the menu system.
- **The soft key area:** The functions of the soft keys are shown in the bottom section of the display. The keys will vary depending on the situation and convention. If no text is shown, the soft key has no function. The last soft key is used to acknowledge an "Alert Annunciation" alarm. In the New Zealand convention it is used to "Acknowledge Alarm".
  Silenced Alarms is indicated by the symbol to the right in this area.

5.2 Symbol area

The symbol area is located at the top of the display, see chapter 5.1 above.

Table 11 Symbol indications

Symbol area	
Symbol	**Indicating**
	The door is open in any C.I.E. See “Open doorpage” page 44. See also menu H4/U3.
	Loss of mains in any C.I.E. or external power supply unit in the system, i.e. blackout or mains is switched off and the power is supplied via battery backup.
	The week average sensor value has exceeded the service level for one or more analogue smoke sensors in the system. See also page 119 and menu H4/U5.
	The C.I.E. is set in “Sensitive fault detection mode” via menu H5/A2, see page 125.
	One or more “Technical warnings” are generated in the system. See also menu H4/U6.

Note that the symbol area may be suppressed see chapter Priority Order, Table 12.

5.3 The information area priority order

When the control unit / system is in normal operation (quiescent state), i.e. no fire alarms, no faults, no disablements, no service signals, no zones in test mode, no activated interlocking inputs/outputs, and/or Alert Annunciation function not enabled, only the LED "Operation" (L5) should be lit and some **system information** is shown in the control unit display. However, the system information has the lowest priority and more important information suppresses less important. In some cases also valid for the symbol area. The priority order is shown in Table 12.

Table 12: Priority Order

Priority	Event	Symbol area is visible
1	Fire alarms (see below)	No
2	Quiet alarm	No
3	Co-incidence alarm	No
4	Delayed alarm	No
5	Pre-warning	No
6	Test mode alarm	No
7	AAF alarm	Yes
9	*New Zealand convention only:* Routing equipment left isolated	Yes
10	Fault (not acknowledged)	Yes
11	Disablement	Yes
12	Zones in "Test mode"	Yes
13	Interlocking input / output active	Yes
14	System information	Yes

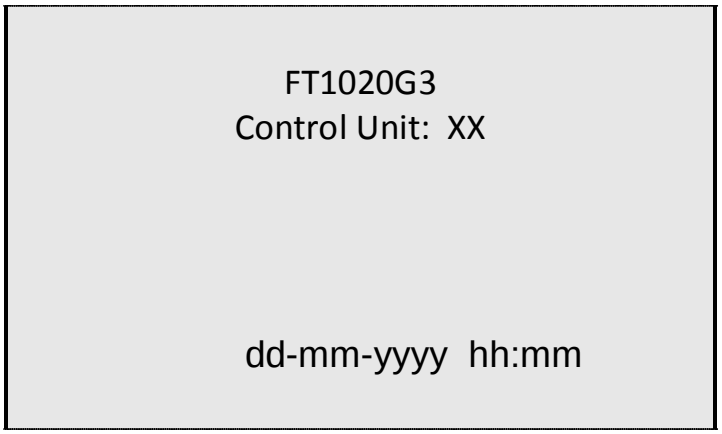
Different types of fire alarms as follow:

- Fire alarm
- Heavy smoke/heat alarm
- Alert Annunciation (AA) alarm
- Acknowledged alarm (New Zealand only)
- Isolated alarm (New Zealand only)

The different type of events and the menu system are described in other parts of this document. Regarding "System information in the LCD", see section “System information in the LCD” below.

5.4 System information in the LCD

FT1020G3, control unit number, date and time are displayed.
An example:



dd-mm-yyyy = (Date) Day-month-Year
Control Unit; XX = 00-29
hh:mm = (Time) hour:minute

5.4.1 User definable system information

User definable system / installation information (created and downloaded via EBLWin) can be displayed in the middle of the display. Two rows are available, 40 characters in total. This information is shown in all control units in the system.

One example:

6 User level, User name & Password

FT1020G3 has different access levels for different users.

To log on to an FT1020G3 (version ≥ 2.0) a **User name** and **Password** are required. Ten different User names with individual Passwords can be used. Each User name has a specific user level, which has access to specific menus according to Table 13.

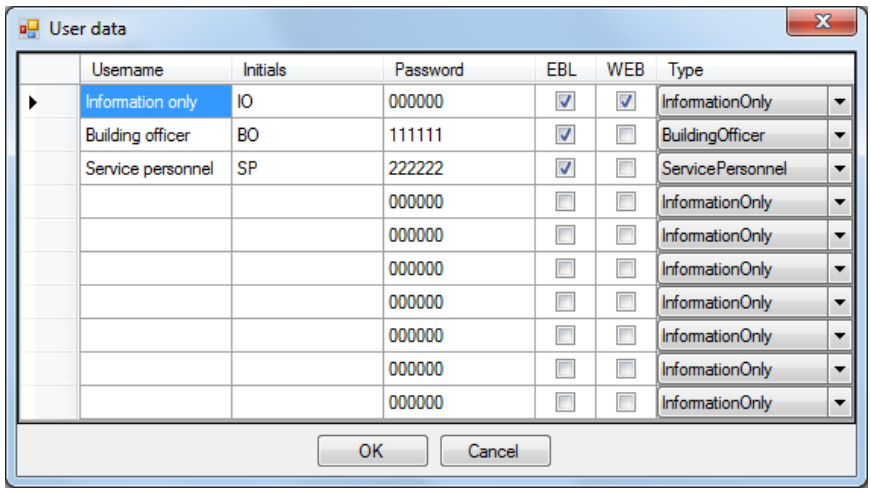
Table 13: Access Levels and user names

User level	User level name / type	Required action / equipment	Access to
0	None	None (Door closed).	View indications and controls
1	Fire service personnel	Open door (003 key required).	Fire alarm response via fire brigade section, fan control, hot buttons zone disablement
2A	Information only	003 key + log on as "Information only"	Same as 1 + keypad. Menu H4, H6 [a)], H7, H9 [b)] & H10
2B	Building officer	003 key + log on as "Building officer"	Same as 1 + keypad. Menu H1-H4, H6, H7, H9 & H10
3A	Service personnel	003 key + log on as "Service personnel"	Same as 1 + keypad. Menu H1-H10
3B	-	PC + EBLWin + H/W key	SSD & S/W download
4	-	PC + EBLWin + H/W key + special password	SSD & S/W download + reset of alarm counter

a) Information only, i.e. the faults cannot be acknowledged.

b) Menu H9/C1 only.

Ten different User names with individual Passwords are available and can be defined Via EBLWin (menu "System") in the "User data" dialog box. They can be used to log on to an FT1020G3 (version ≥ 2.0) and/or Web-server access. Three User names and Passwords are set as default as shown in the following table:



6.1 User level 0

With the door closed, **no** access, controls indicators are viewed through outer door.

6.2 User level 1

After the door has been opened using 003 key ("Door open" symbol in the symbol field), **the designated user / fire brigade personnel** have access to the following push buttons:

Push button	Operation/function
P1	Silence the buzzer in the C.I.E.
P2	Silence all alarm devices (OWS or sounders).
P3	Reset fire alarms. (see below)
P4	Disable active alarm (S)
1668 Fan Control	Manual override of AS1668 fans, if fitted
Zone Disablement	Quick access to zone disablement, if fitted

Possible Fire alarms as follow:

- Fire alarm (including heavy smoke/heat alarm)
- Alert Annunciation (AA) alarm
- Co-incidence alarm (if not reset automatically)
- Acknowledged alarm (New Zealand only)
- Isolated alarm (New Zealand only)

6.3 User level 2A

After the door has been opened with 003 key ("Door open" symbol in the symbol area), you have access to level 2A and log on as “Information only” (level 2A), access to the following menus:

H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT Acknowledge, ***NOTE:*** *Information only*
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
H10 Change password (In this case for “Information only”.)

6.4 User Level 2B

After the door has been opened using 003 key ("Door open" symbol in the symbol area), you have access to level 1 and after log on as “Building officer” (level 2B), access to the following menus:

H1 Perform monthly test
H2 Disable or re-enable
B1 Zone or Zone / Address
B2 Output
B3 Output type
B4 Alarm devices
B5 Routing equipment
B6 Alert annunciation function
H3 Set calendar and clock
H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT Acknowledge
H7 Perform ZONE TEST ("Test mode")
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
C2 Activate / deactivate interlocking output
C3 Disable / re-enable interlocking output
H10 Change password (In this case for “Building officer”.)

6.5 User level 3A

After the door has been opened using 003 key ("Door open" symbol in the symbol field), **the service / maintenance personnel** have access to level 1 and after log on as “Service personnel” (level 3A), access to all menus, i.e. same as level 2B and also to the following menus:

Same menus as in access level 2B **plus** the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in control unit
A5 Display current consumption on COM-loop
A6 Display statistics for communication
A7 Activate address setting mode for DU
A8 SSD information
H8 Maintenance
S1 Dis- / Re-connect loop / zone line input
S2 Acknowledge SERVICE signal
S3 Clear weekly average
S4 Test of alarm devices
S5 Safe shut down of control unit
S6 Activate address in alarm mode
S7 Synchronize the control units
S8 Activate / Reset outputs
H10 Change password (In this case for “Service personnel”.)

6.6 Access level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **EBLWin**) is to be connected to FT1020G3 for backup (upload), download of site specific data and/or download of software.

EBLWin require a hardware key.

6.7 Access level 4

Used by manufacturer or by personnel authorised by the manufacturer for re-initialisation (reset) of the alarm counter, change software configurations, on-line status checking, etc. A special password is required.

7 Silence Alarm devices

In the control unit front (the FBP part) there is a push button "**SILENCE ALARM**" (P2).

When the alarm devices are activated (sounding)[23] and the push button "**SILENCE ALARM**" is pressed, the following will happen:

- The symbol is shown in the display, to the right of the "Soft key" area.
- The activated outputs programmed for OWS or sounders (i.e. type "Alarm devices", will be turned OFF (de-activated)[24]

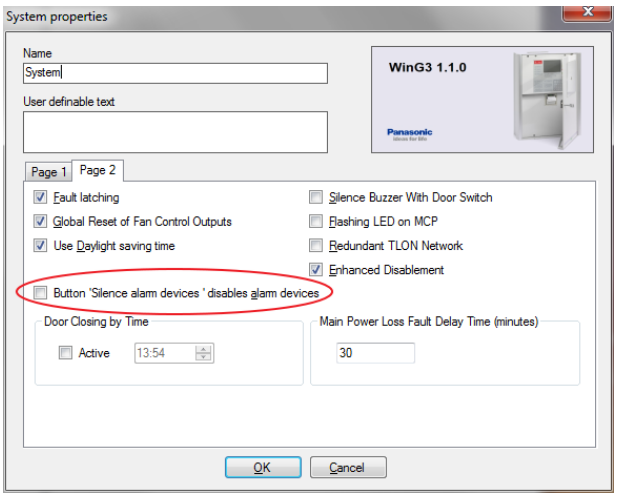
If the push button "**SILENCE ALARM**" is pressed again, the fire alarm devices will automatically re-sound.

In case of a new alarm, the alarm devices will automatically re-sound.

In EBLWin, the option {*Button silence alarm devices disables alarm devices}* can be selected. In this case, the button "**SILENCE ALARM**" (P2) will have the same function as the menu “Alarm devices (H2/B4)” page 106. See also chapter "Disable / Re-enable alarm devices", page 39.

Note 1: *This option (Button Silence alarm devices disables alarm devices) must not be used in the Australian convention as this is a violation to AS4428.3 : 2010.*

Note 2: *In the NZ convention, the function is already implemented in the firmware i.e. there is no need to tick the check box.*



The “FIRE” LEDs will indicate steady instead of blinking when alarm devices are disabled.

[23] e.g. during Fire alarm or Alert Annunciation alarm.

[24] Including Addressable siren 3377, Addressable sounder base 3379, Addressable beacon 4380 and Occupant Warning System (OWS).

7.1 SILENCE ALARM (inside switch)

NOTE! The functions in this chapter are used only in the **New Zealand convention**.

The button "SILENCE ALARM" (P2) operates slightly different in the NZ convention and has the following function:

The button SILENCE ALARM (inside switch) toggles between two states.

- **Alarm devices disabled**
  When the button is presses, all programmable outputs of type "Alarm devices" are disabled, i.e. silences sounders, OWS, strobes, etc. and prevents new alarms from activating the warning devices.
- **Alarm devices not disabled**
  When the button is pressed again, all programmable outputs of type "Alarm devices" will be enabled, i.e. any alarm can activate the warning devices.

If the “SILENCE ALARM” button is left in its disabled state when the CIE door is being closed, the buzzer will beep continuously and the message "Silence switch left active" will be shown in the display. This feature is required in NZS4512:2010 to ensure that the door cannot be closed while the alarm devices are disabled. For priority order see chapter “The information area priority order” page 30.

NOTE: *The "SILENCE ALARM" button on the front display has no function if the “Silence alarms” Bulgin key in the FT1020G3 cabinet or in the remote fire brigade panel (see below) is turned to the “Silence Alarms” position.*

7.2 New Zealand FB “Silence Alarms” Bulgin key (outside switch)

The **New Zealand FB “Silence Alarms” Bulgin key switch** is connected to NZ mimic application board (SUB927) via a programmable input in the IO matrix board 4582 with the trigger condition "NZ Silence switch".

The fire brigade Bulgin key switch can be in two states:

1. **The Bulgin key switch is turned ON** (i.e. from non-activated to activated state).
   a. All programmable outputs of type "Alarm devices" are disabled. The "SILENCE ALARM” switch in FT1020G3 front display (see above) has no function.
   b. LEDs "Fire" (on FT1020G3 front display) changes from blinking to steady.[25]
   c. The CIE built-in buzzer is silenced.
   d. A fault is generated[26]

   "FAULT: FB Silence switch active"

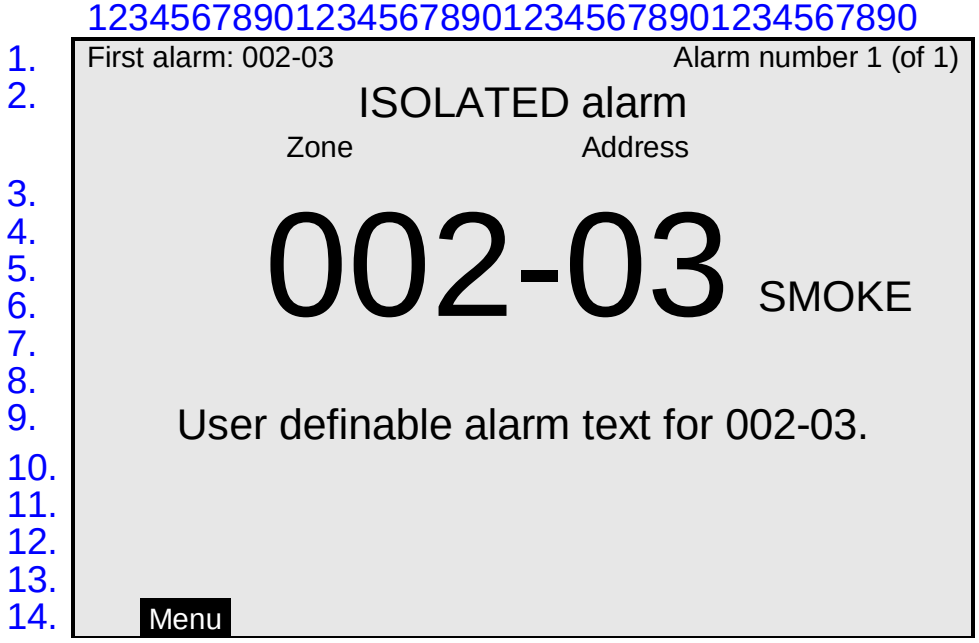
2. **The Bulgin key switch is turned OFF** (i.e. from activated to non-activated state).
   a. The fault "FAULT: FB Silence switch active" will be Serviced[27]

[25] This is valid also if the fire alarm is activated after the Bulgin key switch is turned ON (Silence Alarms position).
[26] Since this fault is always latched, it has to be acknowledged via menu H6.

b. Any fire alarm “ALARM” and acknowledged alarm ”ACKNOWLEDGED” will be automatically disabled (isolated), i.e. it must be re-enabled via menu H2/B1 and is indicated by LED “General disablement” on the C.I.E. front.

c. Any fire alarm "ALARM" and acknowledged alarm "ACKNOWLEDGED" will automatically change state to "Isolated alarm" (see below) and in the fire alarm list (presented in the display) "**ALARM**" or “**ACKNOWLEDGED**” will be replaced by "**ISOLATED**".

An example:



[27] Since this fault is always latched, it has to be acknowledged via menu H6.

8 Disable / Re-enable alarm devices

Outputs programmed for sounders or OWS[28] (i.e. type 3 "Alarm devices") can be **collectively** disabled via menu H2/B4 for all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10) and "Alarm devices" (L11), which are steady ON.
In case of a fire, the sounders or OWS will **remain** disabled, i.e. the alarm devices will not sound until they are re-enabled again via menu H2/B4.

***NOTE**:*

Outputs of type "Alarm devices" cannot be individually disabled, not even via menu H2/B2 "Disable or Re-enable Output"

See also chapters "Test of alarm devices" (H8/S4), page142. All outputs of type "Alarm devices" for a specified or all control units, can be activated for an alarm device test.

[28] Including Addressable siren 3377, Addressable sounder base 3379, Addressable beacon 4380 and Occupant Warning System (OWS).

9 "SILENCE BUZZER" button

The **buzzer** in the control unit will sound for:

- Fire alarm[29] (0.4 / 0.4 sec.)
- Co-incidence alarm (2-zone or 2-unit dependent fire alarm): When only one zone or one zone / address (alarm point) is in alarm status (0.8 / 5 sec.)
- Pre-warning (0.8 / 5 sec.)
- Quiet alarm (0.8 / 5 sec.)
- Fault (continuous)
- Disablements and Faults (1 sec. directly after the door to the C.I.E. is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.

Press **"SILENCE BUZZER"** (P1) to silence the buzzer.

In case of a new alarm (pre-warning, co-incidence alarm, etc.) or if the push button "SILENCE BUZZER" is pressed again, the buzzer will automatically re-sound.

Silence buzzer by open door

In EBLWin the function "Silence Buzzer by Door Switch" can be selected. The buzzer will then be disabled as long as the control unit door is open.

NOTE: *In the New Zealand convention, if any of the outputs for routing equipment ("Fire brigade TX" and "Fault TX") has been disabled, the built-in* ***buzzer*** *will sound continuously once the door is closed. The message "****Routing equipment left isolated****" will be shown in the LCD. This information has higher priority than the normal fault messages and disablements.*

[29] Incl. Heavy smoke/heat alarm, AA alarm, Key cabinet alarm and Acknowledged alarm (New Zealand only).

10 Disable or re-enable Output

All control outputs (except outputs of type “Alarm devices”) can be **individually** disabled via menu H2/B2:

- Loop unit xxxxxx output x
- Control unit xx S0
- Control unit xx R0
- Control unit xx expansion board x output x

This is indicated by LED **Fault / Disablements** "General disablements" (L10).

They will remain disabled until they are re-enabled again via menu H2/B2.

See also chapter Output type (H2/B3), page 104

See also chapter “Activate / Reset outputs (H8/S8)”, page 148. An output can be activated for an output test.

11 Disable / Re-enable Control, Ventilation, Extinguishing and interlocking outputs[30]

All control outputs programmed as type:

- Control (general)
- Extinguishing
- Ventilation (fire ventilation)
- Interlocking

All the above control outputs can be collectively disabled via menu H2/B3 for one, several or all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10). They will remain disabled until re-enabled again via menu H2/B3.

See also chapter "Activate / Reset outputs (H8/S8)", page 148. An output can be activated for an output test.

See also chapter "Activate / deactivate interlocking output (H9/C2)", page 151. An interlocking output can be activated for an output test.

[30] Terminology of Extinguishing and Ventilation has been changed in the fire brigade panel standard AS4428.3 : 2010. Extinguishing re-named to "FIRE PROTECTION ACTIVATED" and Ventilation to "SMOKE CONTROL ACTIVATED".

12 "DISABLE" Button

The "**DISABLE**" push button is provided in the fire brigade part on the front display to enable the fire brigade personnel to disable (isolate) an active alarm such as a zone of addressable sensors, conventional zone or individual addressable device.

A single operation of the "**DISABLE**" button (P4) whilst there is an active alarm will initiate the following:

- Disablement of all zones in alarm and/or addressable devices in alarm.
- Illuminate the "General Disablement" LED L10.
- Disablement of all the outputs configured for zone(s) or device(s) in alarm.

The output indicators activated as a result of an alarm will not clear automatically after disablement. A subsequent reset operation is required to restore the C.I.E to the normal condition.

Note:

The disablement button will not function unless the "SILENCE ALARM" button has been activated first as required by AS4428.3:2010[31].

[31] This function is not required in NZ convention.

13 Open door

A standard 003 key is used to open the control unit door to get access to the front membrane and other optional modules e.g. OWS, zone disable, AS1668 fan control, etc.

If a door in the system (any control unit) is open, the following symbol is shown in the display's symbol area:

See also chapter Open doors (H4/U3), page 115.

13.1 Outputs for routing equipment (Fire brigade Tx and Fault Tx)

Via EBLWin the outputs for routing equipment can be disabled by the door switch[32]. The following can be programmed (default settings shown):

- ⊙ **None**: Open door in a C.U. will **not** disable the output(s) for routing equipment (Fire brigade TX and fault TX).
- ○ **Any control unit door**: Open door in any C.U. will disable the output(s) for routing equipment (Fire brigade TX and fault TX) in all C.U:s.
- ○ **Any door**: Open door in any C.U. or any external FBP[33] will disable the output(s) for routing equipment (Fire brigade TX and fault TX) in all C.U:s.

Disabled outputs for routing equipment are indicated by the LEDs **Fault / Disablements** "General disablements" (L10) and "Fire brigade TX" (L12) and listed in menu H4/U1.

13.2 Silence buzzer by door switch

The built-in buzzer in the C.I.E. can be set Via EBLWin to be silenced when the cabinet outer door is opened.

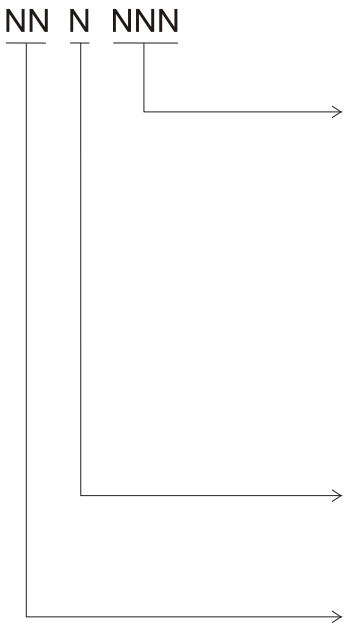
[32] This function MUST NOT be used in Australia and New Zealand
[33] External Fire Brigade Panels (FBP) are not used in the Australian and NZ markets.

14 Technical / Presentation number

14.1 Technical number for COM loop units

The technical number “NN N NNN” is used when programming all units connected to the COM loops.

Technical number is also used to identify which unit has generated a fault.



001 - 255

Technical address on a COM loop.

Addresses don't have to be in sequence.

Connections on the COM loop don't have to be in sequence.

The address for each unit is set with the programming tool 3314 / 4414.

0 - 3

COM loop number

00 - 29

Control Unit (CU) address (number).

CU numbers don't have to be in sequence.

Connections to TLON network don't have to be in sequence.

The address is set with TLON manager software V2.0 or V1.2.

NOTES:

1. Maximum of **1020**[34] COM loop (technical) addresses can be used for one control unit. Any address can be used for alarm point i.e. detector.
2. A brand new detector is factory set to COM loop (technical) address 000. If a detector is connected on the COM loop without setting up an address (001 – 255), the detector LEDs will start blinking every second, indicating that the detector has not been addressed.

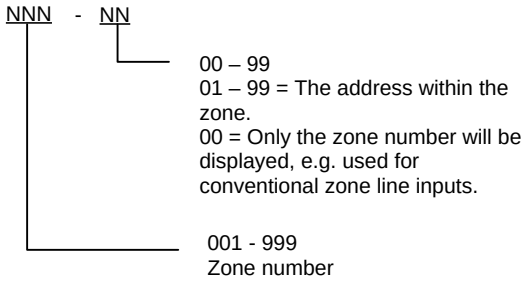
[34] Since **(technical)** address 000 cannot be used, the total number of addresses is 4 x 255 = 1020

14.2 Presentation number

For each fire alarm point / input / zone, a presentation number **NNN-NN** has to be programmed.

The presentation number is shown in the C.I.E. display, alarm presentation unit 1728 and alert annunciation unit 1736 to identify the point / zone activating fire alarm. It is also used to disable / re-enable fire alarm points / zones and as a trigger conditions in the control expressions to activate programmable outputs.

Together with the presentation number, a user definable 40 characters text message (alarm text) can be displayed (if programmed).


NNN - NN
00 – 99
01 – 99 = The address within the zone.
00 = Only the zone number will be displayed, e.g. used for conventional zone line inputs.
001 - 999
Zone number

15 Alarm types

In case of a fire, analogue detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can activate **fire alarm**.

A fire alarm could be an **Alert Annunciation alarm**, i.e. the activation of the routing equipment (fire brigade TX) is delayed during an acknowledgement and investigation time.

AAF alarm (Alarm Acknowledgement Facility) is similar to the alert annunciation function and normally used to control the brigade call alarms. If the AAF function is used, during the acknowledgment and the investigation periods, there will be an indication in the CIE display and the fire brigade TX will be delayed. The AAF function requires an Alarm Acknowledgement Module (AAM 3340), a smoke detector (sensor) 4300/4400 or 4301/4401 and sounder base 3379.

The analogue detectors (sensor) can also activate two other types of "alarm", i.e. **Pre-warning** and **Heavy smoke alarm** / **Heavy heat alarm**.

"Two unit dependent" addressable alarm points (normally smoke detectors only) and "2-zone dependent" zones, can activate a **Co-incidence alarm**.

Quiet alarm is an another alarm type, it is auto resetting analogue smoke detector (sensor) that can be used for fan control and other applications that require a non-latching / non-brigade call alarm.

Acknowledged and **Isolated alarm** is a fire alarm function only used in New Zealand.

Regarding the different alarm types, etc., see the following chapters.

***NOTE**:*

In the following chapters, all different alarm types are described.

> *The figures in this document show the essential information and **may not look exactly** as shown in the display.*

15.1 Pre-warning

Activation of Pre-warning is an option enabled via EBLWin for the control unit.

***Note:** Pre-warnings activated in <u>any control unit in the system</u> will always be presented in all control units and all programmable outputs in the system (with trigger condition pre-warning) will be activated (if not disabled).*

The analogue detector generates a <u>pre-warning</u> at a lower alarm level than the fire alarm level.[35] Pre-warning can be used when <u>an early warning</u> and/or an <u>early action</u> is required (e.g. a "soft" computer shut down). Normal alarm devices (output type "Alarm devices"), routing equipment, etc. will <u>not</u> be activated.

In case of a pre-warning, the following happens:

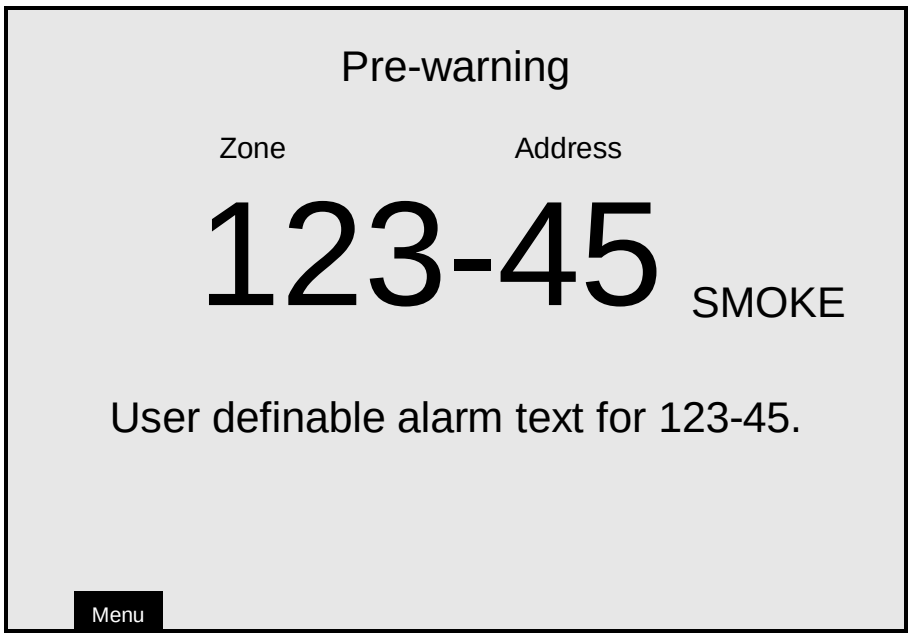
- The buzzer in the C.I.E. sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated.[36]

[35] See FT1020G3 Technical Manual. Any programmable input can also be used to activate a pre-warning, e.g. for a High Sensitivity Smoke Detector system.

[36] Outputs programmed for General pre-warning and outputs programmed for the activated pre-warning(s).

- In the C.I.E. display, a presentation number (zone/address) is shown (for the first pre-warning).
- In the C.I.E. display, a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

Example; pre-warning zone 123, address 45 (within zone 123):



"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

NOTE: *The text "Menu" (P5) is visible in the display, only if the door in the CU is open.*

If more than one pre-warning is activated, the LEDs "SEVERAL ALARMS" (L6) are blinking and the pre-warnings will be automatically scrolled (each five seconds). Pre-warnings are automatically reset see chapter "Alarm reset", page 58.

15.2 Fire alarm

The FT1020G3 system can handle up to 15360 fire alarms but only 512 fire alarms can be shown in the C.I.E. display. If more than 512 fire alarms are activated, no additional fire alarms can be displayed until one or more of the first 512 fire alarms are reset.

It is possible to have **Selective alarm presentation**, i.e. only fire alarms from selected control units will be presented in the control unit, set in EBLWin for each control unit.

See also chapter "The information area priority order", page 30. The following happens in case of a fire alarm:

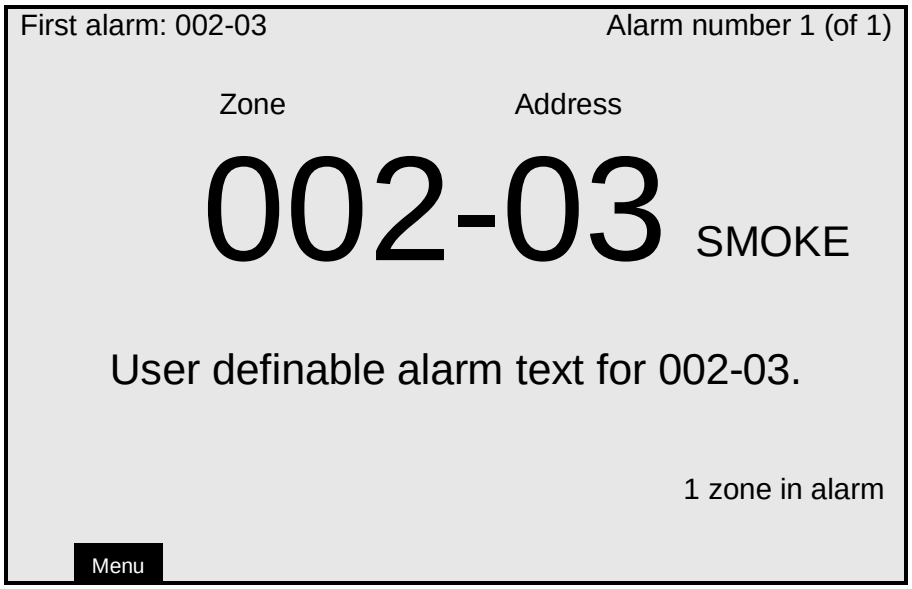
- The buzzer in the C.I.E. sounds 0.4 sec. each 0.4th sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire brigade TX) and outputs type "Routing equipment" are activated.[37]
- Outputs for fire alarm are activated.[38]

[37] In case of **Selective alarm presentation** only for the selected alarms.
[38] Outputs programmed for General fire alarm and outputs programmed for the activated fire alarm(s).

- In the C.I.E. display, a presentation number (zone/address) is shown (for the first fire alarm).
- In the C.I.E. display, a user definable text message (alarm text) is shown (if programmed).
- In the C.I.E. display, some additional information is also presented.

One alarm point activating fire alarm.

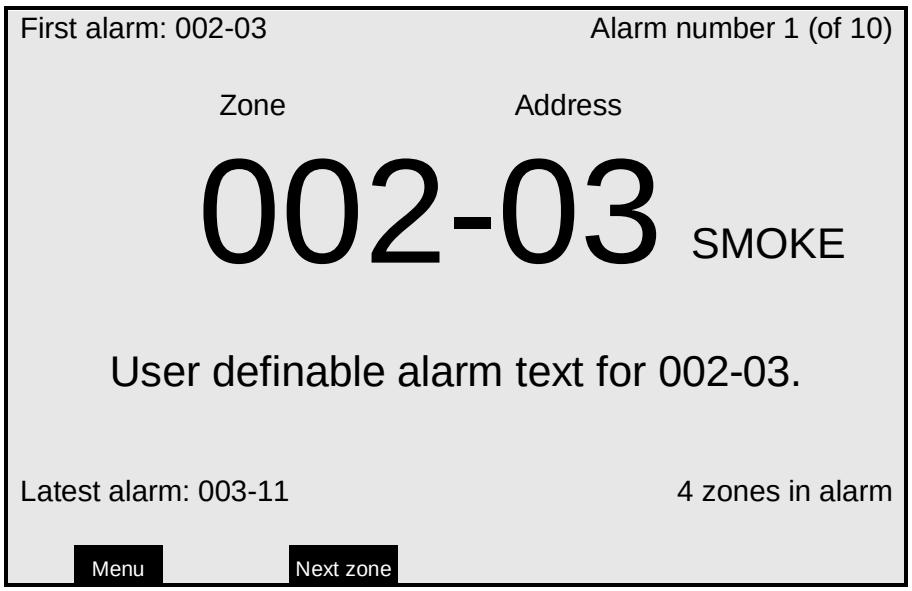
Example; fire alarm zone 002, address 03 (within zone 002):



The presentation number is automatically followed by: SMOKE, HEAT, MULTI or MCP depending on type of alarm point.

More than one alarm point activating fire alarm.

Example; fire alarm in zone 002, address 03 (within zone 002) and nine other fire alarms (of which the latest alarm is 003-11) in four different zones:



"SMOKE" follows the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

User definable alarm text, for each alarm point, an individual alarm text or the default control unit alarm text (if programmed) can be shown. Each zone has its own individual alarm text (if programmed). Up to 40 alphanumeric characters can be used.

Additional information

First alarm, Latest alarm, Alarm number and number of zones in alarm.

LEDs "**SEVERAL ALARMS**" (L6) blinking (0.4 / 0.4 sec.) are indicating that more than one fire alarm is activated. To scroll through the alarm points, use the push button "SEVERAL ALARMS" (P9).

Next zone. Use the soft key "Next zone" (P6) to scroll through the **zones** in alarm.

When scrolling through the zones, the first alarm point activated in the next zone will be shown. The "Next zone" button will be available only if there are alarms in more than one zone.

The first alarm will be automatically displayed again, 20 seconds after the latest time the "SEVERAL ALARMS" or "Next zone" buttons where used.

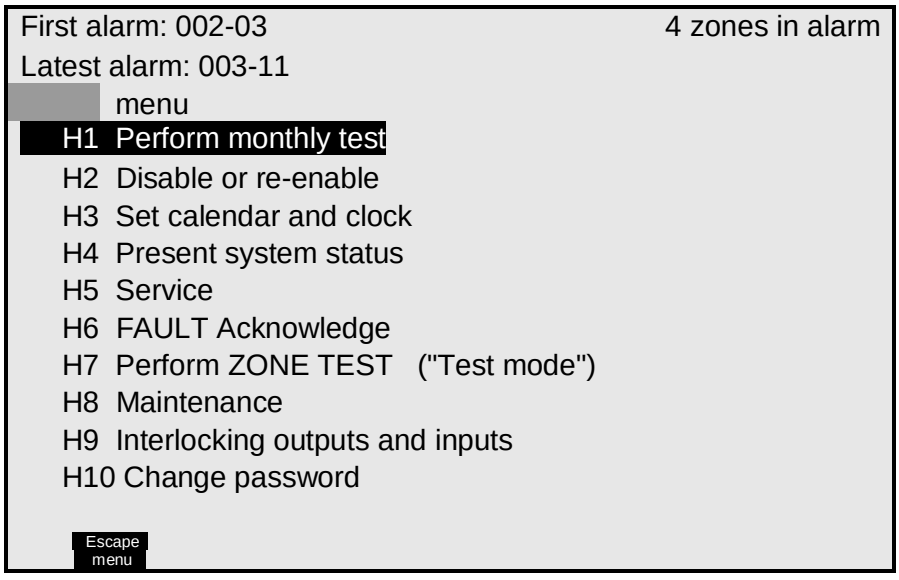
The printer (if available) will print each fire alarm, e.g.:

To **reset** fire alarms, see chapter "Alarm reset", page 58.

15.2.1 Enter the menu during fire alarm

By pressing the soft key "Menu" (P5) during fire alarm, you will get access to the menu system (see Access, page 94).

NOTE: *Access code is required, in this case, part of the display's alarm window will be temporarily suppressed to permit the display of the menu system.*



The normal alarm window will be automatically displayed again after the menu system is left as escaped or 5 minutes after the latest manoeuvre in the menu system.

The alarm window will also be automatically displayed again if any of the soft keys "Esc menu" (P5) or "ESC" is pressed or push button "SEVERAL ALARMS" (P9).

15.2.2 Acknowledged and Isolated alarm

Acknowledged and **Isolated alarm** is a fire alarm function used only in New Zealand convention.

Acknowledged alarm

A fire alarm presented in the display can be acknowledged by pressing the soft key "Acknowledge" (P8).

Acknowledged alarms are indicated in the display by "Acknowledged alarm" in the same position as "Heavy smoke" / "Heavy heat", see below. This indication is the only difference between a normal fire alarm and an acknowledged alarm.

Acknowledged alarms have to be reset same as normal fire alarms.

Isolated alarm

A normal fire alarm or an acknowledged alarm presented in the display can be isolated as follows:

When the "New Zealand FB Silence switch" (outside switch) is turned OFF (from activated to non-activated), any fire alarm and acknowledged alarm will be isolated (=disabled).[39]

Isolated alarms are indicated in the display by "Isolated alarm" in the same position as "Heavy smoke" / "Heavy heat".

Isolated alarms do not activate any control outputs, do not activate the output for routing equipment (Fire brigade TX), do not activate the C.I.E. buzzer and do not activate the LEDs "Fire" (L1) in the C.I.E.

Isolated alarms have to be reset same as normal fire alarms.

Isolated alarms also have to be re-enabled via menu H2/B1 before they can activate a new fire alarm again.

15.2.3 Test mode alarm

Regarding Test mode, see chapter "Perform monthly test (H1)", page 96 and chapter "Perform ZONE TEST (Test mode) (H7)", page 134.

When an alarm point in a zone set in test mode is tested, it is presented in the display as a fire alarm but with the information "Test mode" added. If a printer is available the test mode alarm will be printed with the information "(test mode)" added.

The LEDs "Fire" will be blinking (same as fire alarm) but no outputs will be activated except the fire door outputs. The test mode alarm will be automatically reset after approx. 10 seconds.

[39] LED **Fault / Disablements** "General disablements" (L10) is indicating that one or more zones / alarm points are isolated (disabled).

15.3 Heavy smoke alarm / Heavy heat alarm

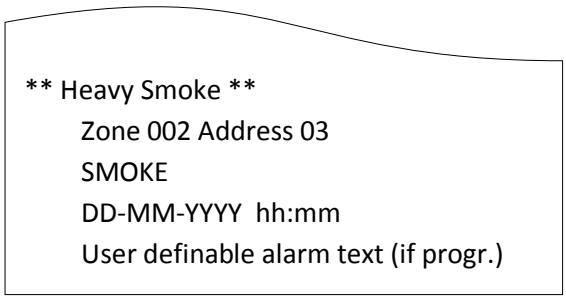
An analogue detector (sensor) can activate a heavy smoke / heat alarm for a higher alarm level[40] than the normal fire alarm level, i.e. a normal fire alarm is already activated by a detector activating a heavy smoke / heat alarm.

Heavy smoke / heat alarm confirms increasing the smoke / heat level above the normal fire alarm level and can be used for special actions, e.g. activation of smoke ventilation, etc.

The following occurs in case of a heavy smoke / heat alarm:

- Outputs programmed for heavy smoke / heat alarm are activated.[41]
- Each heavy smoke / heat alarm is presented with a "title", i.e. "Heavy smoke" or "Heavy heat" will be added to the normal fire alarm information:

The printer (if available) will print each heavy smoke / heat alarm, e.g.:

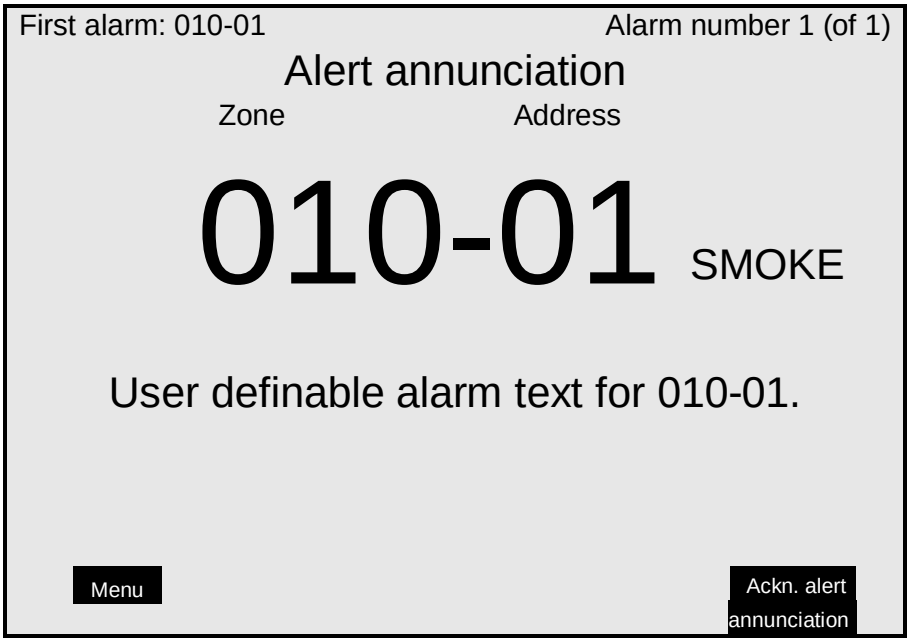


Heavy smoke / heat alarm will be reset when the fire alarm is reset, see chapter "Alarm reset", page 58.

[40] See FT1020G3 Technical Manual.
[41] For both general heavy smoke / heat alarm and individual alarm points / zones.

15.4 Alert Annunciation alarm (AA alarm)

When the **AA** function is enabled, indicated by the LED **Routing equipment** "Fire brigade TX delay" (L14), the indications, print-outs, actions etc. are the same as for a normal fire alarm (see above) **except for the C.I.E. output for routing equipment (fire brigade TX), which will not be activated directly.** There will also be a "title", i.e. "Alert annunciation" or "Alert annunciation acknowledged" added to the normal fire alarm information. The **AA** alarm has to be acknowledged within an acknowledge time and reset within an investigation time, otherwise the output(s) for routing equipment (fire brigade TX) will be activated. See FT1020G3 Technical Manual for more information regarding the **AA** function. Acknowledgement and reset of the **AA** alarm can be performed on an **AA** unit 1736. See also chapter "Alert Annunciation", page 59.



NOTE: *The "Ackn. alert annunciation" text is only visible if an AA alarm is activated.*

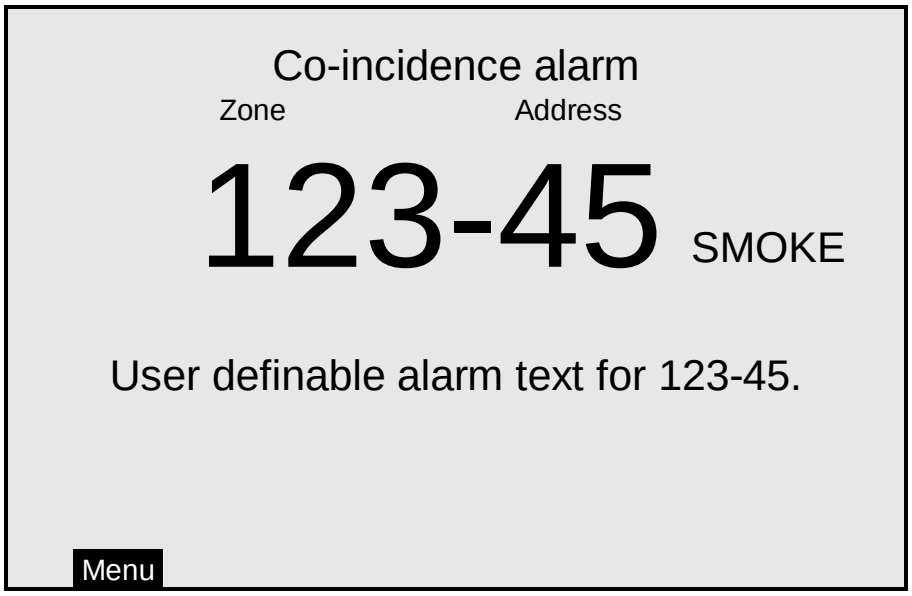
15.5 Co-incidence alarm (2-address / -zone dependence)

The co-incidence alarm function is programmed via EBLWin for the alarm points / zones in question.

When only one **zone** or one **zone / address** (alarm point) is in alarm status, the C.I.E. buzzer sounds (0.8 / 5 sec.) and there is a **Co-incidence alarm** presentation in the display. Note that LEDs "Fire" (L1) are not indicating a co-incidence alarm.

The co-incidence alarm will be automatically **Reset** after 5 minutes (i.e. if the zone / alarm point is no longer in alarm status) or via the "Reset" button (P3). See chapter "Alarm reset", page 58.

Example; Co-incidence alarm zone 123, address 45 (within zone 123):



If more than one Co-incidence alarm **not** dependent on each other are activated, the LEDs "SEVERAL ALARMS" (L6) are blinking and the Co-incidence alarms will be automatically scrolled (each 5th second).

If two or more **zones** or **alarm points** (zone / addresses) dependent on each other are in alarm status at the same time, normal fire alarm (see above) will be activated in the system.

The co-incidence alarm function can be turned on / off via a time channel.

15.6 Delayed alarm

Delayed alarm is an option that has to be enabled via EBLWin for the alarm point.

The delay time (0-255 sec.) is set for the whole system via EBLWin (System Properties, page 1). The delay time will be added at the end of the alarm algorithm when a fire alarm normally would have been activated. For that reason this "extra" delay time should be as short as possible. In fact, if the C.I.E is connected to the brigade, it is not allowed to delay the alarm signal.

The Delayed alarm will be activated when the delay time countdown has started and a normal fire alarm will not be activated until the delay time has run out. No outputs will be activated.

In case of a Delayed alarm, the following occurs:

- The buzzer in the C.I.E. sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- In the C.I.E. display, a presentation number (zone/address) is shown (for the first delayed alarm). Also a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

Example; Delayed alarm zone 123, address 45 (within zone 123):

The presentation number is automatically followed by "SMOKE" depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

NOTE: *The text "Menu" for the soft key "P5" is visible in the display, only if the door in the CU is open.*

If more than one Delayed alarm is activated, the LEDs "SEVERAL ALARMS" (L6) are blinking and the Delayed alarms will be automatically scrolled (each 5th second).
Delayed alarms are automatically reset see chapter "Alarm reset", page 58.

15.7 Alarm Acknowledgement Facility (AAF)

One or more Alarm Acknowledgement Facility Controls (AAM) can be used in the system.

The AAF is a function requires wall mounted Alarm Acknowledgement Module 3340[42] (AAM) used in residential applications to provide the occupant with a local control facility to avoid nuisance alarms within the occupancy e.g. cooking fumes, smoking, aerosol spray, steams, etc. from generating general fire alarm within the building. It provides the occupant inside the sole occupancy unit with a pre-determined time to acknowledge a nuisance alarm and time to clear the smoke of the smoke chamber.

A complete AAF requires an AAM 3340, one or more sounder base 3379 and up to 5 smoke detectors (sensors).

Each AAF unit is configured as an AAF zone which may include up to 5 smoke detectors (sensors).

See FT1020G3 Technical Manual chapter "Alarm Acknowledgement Facility (AAF)" for more information.

[42] 3340 is Brooks stock number for the Alarm Acknowledgement Module (AAM), in EBLWin it is programmed as “AAFC Alarm acknowledgement facility control”.

During the Acknowledgement Period (10-60 sec.), the following information (a list if many) is shown in the C.I.E. display:

AAF zone zz, activated dd-mm-yyyy hh:mm

During the Investigation Period (0-3 min.), the following information (a list if many) is shown in the C.I.E. display:

AAF zone zz, investigation in progress dd-mm-yyyy hh:mm

15.8 Quiet alarm

One or more smoke detectors, via EBLWin programmed for Quiet alarm, have passed the fire alarm level.

A smoke detector can be programmed via EBLWin to quiet alarm i.e. non-latching or self-resetting alarm. This feature is used in AS1668 supply air / stair pressurization fan control applications or in residential units as a non-latching smoke alarm.

In AS1668 supply air fan applications, the type “Quiet alarm” is used to set the duct detector to be non-latching and resets automatically after the post timing[43] is completed which is configured in EBLWin.

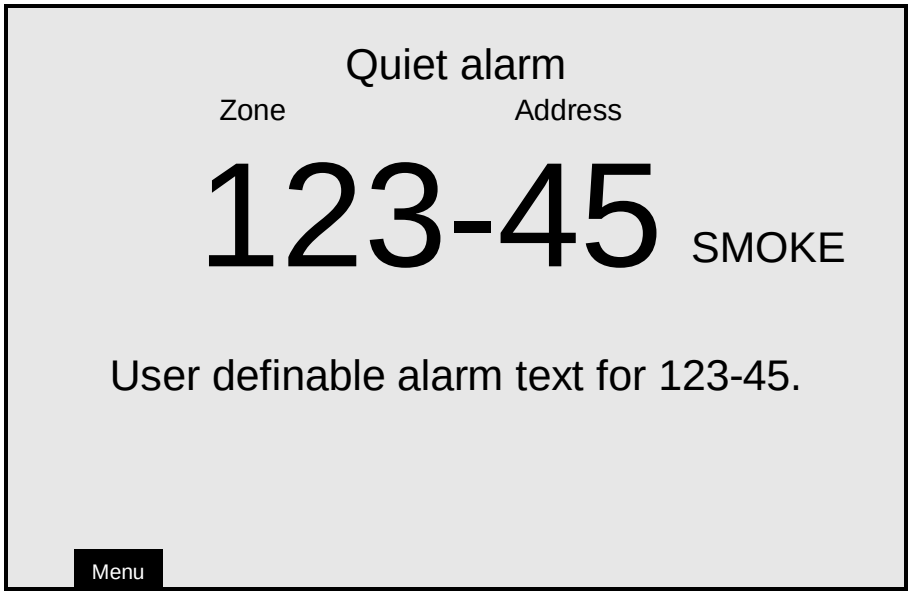
In 1668 fire fan control applications, the “Quiet alarm” is normally used in conjunction with one I/O Matrix board 4582, one application board SUB902 (fan control & display board)[44] and one I/O unit 3361 (for fan control) to control each fan.

In residential applications, type “Quiet alarm” is used in conjunction with the sounder base 3379 and AAM 3340 as a local warning inside the sole occupancy unit.

Quit alarm Indications and actions:

- Detector LEDs are turned on (also a connected RIL).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- The buzzer sounds (0.8 / 5 sec.),
- A Quiet alarm presentation (incl. a title "Quiet alarm") in the display.

[43] When the smoke clears up from the smoke chamber, the detector resets after predetermined time (normally 60 sec.)
[44] The SUB902 can be used for control of up to four fans.



Programmable outputs for quiet alarm is required e.g. 3361 outputs controlling fan operation i.e. any output with a control expression containing the trigger conditions "Quiet Alarm Zone" or "Quiet Alarm Zone Address".

Quiet Alarms are automatically reset, non-brigade call alarm and do not activate any common alarm output, see “Quiet alarm reset” page 60.

16 Alarm reset

Note: The alarm reset using the "RESET" button will not function unless the programmed alarm devices have been silenced i.e. "SILENCE ALARM" button is activated.

16.1 Pre-warning reset

Pre-warning is automatically reset (non-latching).

16.2 Fire alarm reset

NOTE: *The detectors having activated fire alarm should, after reset, be inspected, tested and replaced when required.*

One of the following alarm reset options can be selected via EBLWin. "All" is the default setting.

16.2.1 All (Default)

All activated fire alarms (alarm points / zones) will be reset by pressing "RESET" (P3) once but must be preceded by "SILENCE ALARM" button (P2) activation (this is in accordance with the AS7240.2 standard and AS4428.3:2010).

NOTE: *The push button has to be pressed for minimum 0.5 sec.*

When all fire alarms are reset, LEDs "FIRE" (L1) and "SEVERAL ALARMS" (L6) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 30.

All outputs (for fire alarm) are reset, i.e. de-activated.

NOTE: *When "Single" or "Single with automatic disablement" is used, all alarms can be reset by pressing "RESET" (P3) and approx. 0.1 sec. later also press "Enter" and hold them pressed for > 0.5 sec. The function should not be used in the Australian convention.*

16.2.2 Single

Each fire alarm (alarm point / zone) has to be reset one by one.

NOTE! *This function is available only if it is set in EBLWin.*

Press "RESET" (P3) to reset the fire alarm currently shown in the middle of the display with large digits.

NOTE; *The push button has to be pressed for min. 0.5 sec.*

Output(s) programmed for that fire alarm (alarm point / zone) will be reset, i.e. de-activated.

If more than one fire alarm is activated (i.e. LEDs "SEVERAL ALARMS" (L6) are lit) the next fire alarm in the queue will be shown in the middle of the display. It has to be reset the same way as the first one.

When all fire alarms are reset, LEDs "FIRE" (L1) and "SEVERAL ALARMS" (L6) are turned off. If there is other conditions e.g. fault condition, the corresponding information will be shown (fault message), for priority order see chapter 5.3, page 30.

All outputs (for fire alarm) are reset, i.e. de-activated.

16.2.3 Single reset with automatic disablement

Similar to "Single reset" but includes the encapsulation function:

Normally when an alarm point or zone having activated fire alarm is reset whilst it is still in alarm status, it will activate a new fire alarm within 20 seconds (In accordance with the AS7240.2 standard).

When "Single with automatic disablement" reset is performed, an alarm point or zone, still in alarm status, will not only be **reset** but also **disabled**, i.e. it will not activate a new fire alarm.

It has to be re-enabled via menu H2/B1 before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to the AS7240 standard.)

LED **Fault / Disablements** "General disablements" (L10) is indicating one or more disablements in the system.

***NOTE**:*

When "All" or "Single" reset is used, "automatic disablement" (encapsulation function) can be used by pressing "Reset" (P3) and approx. 0.1 sec. later also press "SEVERAL ALARMS" (P9) and hold them pressed for > 0.5 sec.
The alarm point **or** the whole zone (conventional) currently shown in the middle of display with large fonts will be reset and disabled.

16.2.4 Acknowledged and isolated alarm

Acknowledged and isolated alarms are fire alarm functions used only in the New Zealand convention.

Acknowledged alarm

Acknowledged alarms have to be reset same as normal fire alarms.

Isolated alarm

Isolated alarms have to be reset same as normal fire alarms.

Isolated alarms must be re-enabled via menu H2/B1 before a new fire alarm can be activated.

16.2.5 Test mode alarm

Test mode alarm is automatically reset after approx. 10 seconds.

16.3 Heavy smoke / heat alarm reset

If a heavy smoke / heat alarm has been activated, it will be reset at the same time as the corresponding fire alarm is reset. Also the output(s) will be reset, i.e. de-activated.

16.4 Alert Annunciation

Regarding the function, see chapter "Alert Annunciation alarm (AA alarm)", page 53 and FT1020G3 Technical Manual, chapter "Alert annunciation". Reset of the **AA** alarm(s) can be performed via push button "Reset" on an **AA** unit 1736 (or in the C.I.E.).

NOTE: Reset via an AA unit (1736) is possible only during the investigation time and only if the alarm is an **AA** alarm (not normal fire alarms). If more than one **AA** alarm is activated, they will be reset all at the same time.

16.5 Co-incidence alarm

A Co-incidence alarm can be manually reset with the "RESET" button (P3) on the C.I.E. front **or** automatically reset after 5 minutes (i.e. if the alarm point / zone is no longer in alarm status). See also chapter "Co-incidence alarm (2-address / -zone dependence)", page 53.

16.6 Delayed alarm

The Delayed alarm will be automatically reset if the alarm point during the delay time countdown is no longer in alarm state or when a normal fire alarm is activated (i.e. when the delay time has run out).

16.7 Alarm Acknowledgement Facility (AAF) reset

NOTE! The AAF function is used in conjunction with an Alarm Acknowledgement module AAM (3340).

The indication in the control unit display, during the Acknowledgement Period (10-60 sec.) and the Investigation Period (0-3 min.) respectively, will automatically disappear when:

- The AAF process is terminated because no detector in the AAF zone is over the fire alarm level.
- The AAF process ends up in a fire alarm, which has higher priority. (Regarding Fire alarm reset, see above.)

16.8 Quiet alarm reset

Quiet alarms are non-latching, i.e. they will be automatically reset when the alarm point / zone is no longer in the alarm state. Outputs activated by quiet alarm will be de-activated (in some cases after a programmable delay time).

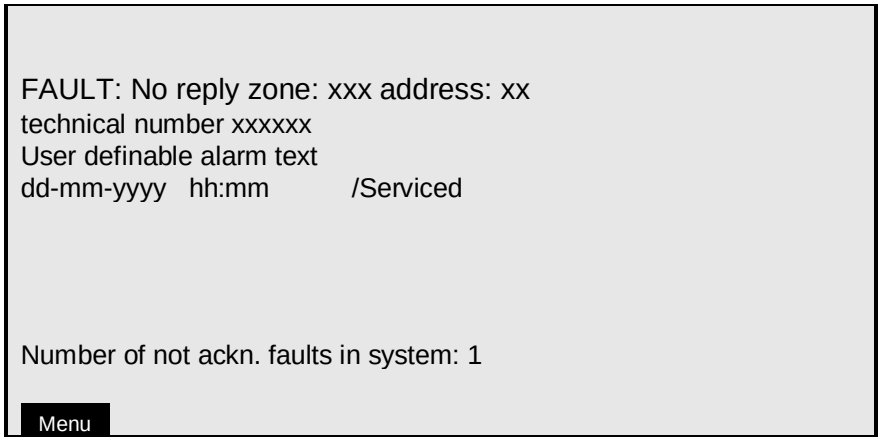
17 Fault

All faults are delayed in order to avoid generating unnecessarily faults e.g. the delay time for COM loop and zone line input faults is approx. 45 seconds[45].

In case of a fault condition, the following will happen in the control unit:

- The buzzer in the C.I.E. will sound continuously (steady)[46].
- The fault condition output for routing equipment (Fault TX) will be activated.
- Programmable output(s) for general fault will be activated and output(s) for general charger fault may be activated.
- LED Routing equipment "Fault TX activated" (L13) will be turned on indicating that the fault condition output for routing equipment (Fault TX) is activated.
- LED Fault / Disablements "General fault" (L9) will be turned on.
- LEDs Fault / Disablements "Alarm devices" (L11), "System fault" (L7) and/or Fault / Disablements "Fire brigade TX" (L12) may be turned on as well.
- A fault message including date, time and status will be shown in the C.I.E. display.

Example; fault message:


FAULT: No reply zone: xxx address: xx
technical number xxxxxx
User definable alarm text
dd-mm-yyyy hh:mm /Serviced
Number of not ackn. faults in system: 1
Menu

- In the C.I.E. display up to three fault messages can be shown simultaneously. In the display, down to the left, the number of not acknowledged faults is displayed.
- If a fault has been corrected (serviced) before it has been acknowledged, the status information is "serviced", see above.
- Fire alarm presentation has higher priority than the fault messages, however during fire alarm presentation the faults can be shown via the menu system, see “Enter the menu during fire alarm” page 50.
  NOTE: *Also during fire alarm, two faults have their own separate information texts shown close to the soft key area:* ***Extinguishing fault*** *i.e. a fault output connected to a programmable supervised input type “Extinguishing” in the*

[45] Some units may also have an internal delay time, which makes the delay time even longer, e.g. the Multipurpose I/O unit 3361 has an internal delay time of 30 seconds, which results in 45+30=75 seconds delay time in total.

[46] The buzzer in the control unit can be suppressed for faults generated in other control units. "Suppressed buzzer during fault" is set via EBLWin.

*extinguishing system. The second fault "**Extinguishing wire fault"** i.e. a fault in a supervised output programmed as type "Extinguishing".*

Faults are normally latched[47] and have to be acknowledged, this is done via menu H6 (see page 50). This menu is a list of all faults in the system:

- Not corrected / serviced and not acknowledged fault
- Not corrected / serviced but acknowledged fault (acknowledged)
- Corrected / serviced but not acknowledged fault (serviced)

If a fault cannot be corrected, it is important to contact service personnel / engineer immediately.

***NOTE**:*

As a reminder, faults (and disablements) are indicated by a 2-sec. beep when an open C.I.E. door is being closed.

[47] Can via EBLWin be set to be "not latched", in NZ convention is set to non-latching.

17.1 Fault messages

Below follows a list of all fault messages, in alphabetical order. There is also an explanation to each fault.

Checksum fault in downloaded data. Control unit will now restart
A fault in the downloaded Site Specific Data (SSD). After the restart a new fault will be generated: FAULT: Site Specific Data (SSD), control unit xx. A new SSD download will probably solve the problem.

FAULT: 24V for external equipment output x, control unit xx
x = Power supply output 1-4 (J3:5-12). xx = 00-29. Check fuse F9, F10, F11 and F12 respectively on the Main board 5010 in control unit no. xx. Fuse: T**4A** L 250V (TR5).

FAULT: 24V for routing equipment, control unit xx
Power supply output 0 (J3:3-4). xx = 00-29. Check fuse F8 on the main board 5010 in control unit no. xx. Also indicated by LED **Fault / Disablement** "Fire brigade TX" (L12) blinking. Fuse: T**500mA** L 250V (TR5).

FAULT: 24V out, output unit xxxxxx
This is valid for the external power supply 3366 connected on the COM loop. The output might be turned off or the current output limit (4A) is exceeded.

FAULT: Alert annunciation unit xx, control unit xx
1736 (Alert Annunciation Unit - AAU.) The AAU unit xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Battery not connected, control unit xx
Battery voltage is below 18.9 V. Batteries (2 x 12 V) are missing or not connected correctly. Fuse F2 on the Main board 5010 is blown. Other battery fuse is blown.

This check is done every 14th minute but when the fault is generated the check is done every 30th sec. Fuse: T6.3A H 250V (5x20 mm ceramic).

FAULT: Battery, technical number xxxxxx
The charging function in the external power supply 3366 connected on the COM loop is not functioning. The PCB has to be replaced. Batteries (2 x 12 V) are missing or not connected correctly.

FAULT: Charger, control unit xx
The battery charging function is not OK. The main board 5010 may have to be replaced.

FAULT: Charging external power supply, control unit xx
The fault is to be found in the external power supply equipment, which has a charging fault output connected to a programmable input in control unit no. xx.

FAULT: Checksum MMI program, control unit xx
A fault in the control unit xx MMI board 5011 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Checksum system program, control unit xx
A fault in the control unit xx Main board 5010 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Control unit xx has no contact with control unit xx, network x
network x = network 0 or network 1 Network 0: In a **redundant network**, the communication is normally on Network 0 only. Network 1: In a **redundant network** is Network 1 normally in a supervised quiescent state until there is a fault (cut-off or short circuit) on Network 0. Check the TLON network cables / connections. (Also for mixed Network 0 and Network 1 cables.)

Faulty TLON connection board 5090. The control unit has no power. Can be shown in conjunction with new S/W download.

FAULT: Cut-off loop x, control unit xx SCI nn <-> SCI nn
This fault is indicating a cut-off (break) on **COM** loop x or the **COM** loop voltage is too low at the end of the loop. SCI **n** <->SCI **n** describes between which Short Circuit Isolators the cut-off is located. **n** = A, B, 0, 1, 2, 3, 4, 5, 6 .....63. A & B is the built-in isolator in the FT512 G3 A-direction and B-direction respectively. If no SCI is used, the information will always be: SCI **A** <-> SCI **B**. If only one SCI is used (e.g. 4313 no. 0), the information will be: SCI **A** <-> SCI **0** or SCI **0** <-> SCI **B** ...and so on. If it is a single break (cut-off) on the loop, there will be no other fault messages. If there are several breaks on the loop the message shows the last isolator before the break in the A-direction (incl. the following isolator). There will also be a "FAULT: No reply ….." message for each unit that FT1020G3 cannot find and "FAULT: Multiple faults …". *NOTE: Each 10th minute a new attempt is made to communicate in one direction only.* When all breaks are repaired (corrected) the communication automatically returns to communicate in one direction only.

FAULT: Earth fault (plus), control unit xx
FAULT: Earth fault (minus), control unit xx
Earth fault is detected in control unit no. xx. System voltage is normally 24 V DC. +24V to earth is normally 12.5 V. 0V to earth is normally 11.5V. Voltage to earth < 3.4V = Earth fault (minus). Voltage to earth > 18.3V = Earth fault (plus). Check all cables (for damage, etc.). The function of the control unit cannot be guaranteed. Call for service personnel/engineer.

FAULT: Earth fault, output unit xxxxxx
Check all cables (for damage, etc.) connected to the unit.

FAULT: External presentation unit xx, control unit xx
1728 (Ext. Presentation Unit - EPU.) The EPU xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Expansion board x, control unit xx
This is valid for the exp. boards 4580, 4581 & 4583, i.e. no. x, mounted in the control unit no. xx. There is some internal fault on the board, which has to be replaced.

FAULT: Expansion board x, loop x, control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x (0-3) in the control unit no. xx. There is some internal fault on the board, which has to be replaced.

FAULT: External fuses, control unit xx
The fault is to be found in the external power supply equipment, which has a fuse fault output connected to a programmable input in control unit no. xx.

FAULT: External power supply, control unit xx
The fault is to be found in the external power supply equipment, which has a fault output connected to a programmable input in CU xx.

FAULT: Extinguishing system, control unit xx
The fault is to be found in the extinguishing system (FIRE PROTECTION ACTIVATED), which has a fault output connected to a programmable supervised input in the FT1020G3 system, in control unit no. xx. Also check the input connections. **NOTE!** Close to the soft key area in the display there will be an additional information text: “Extinguishing fault”.

FAULT: Factory settings, control unit xx
The factory settings have been "changed", in control unit no. xx, e.g. because of some external disturbance. The main board has to be replaced.

FAULT: Fan xx, technical number xxxxxx
The LED "Fault" is lit on a fan control module connected to control unit xx. Fan no. xx has been triggered but the corresponding I/O unit 3361 input has not been activated within the programmed time. Check the pressure switch in MSSB and the cables / connections. **NOTE!** In the Australian and New Zealand conventions this fault is "not latched" irrespective of if all other faults are "latched".

FAULT: Fault warning routing equipment, control unit xx
The fault is to be found in the Fault warning routing equipment. A routing equipment fault output is connected to a programmable supervised input in the FT1020G3 system, in control unit no. xx. Check the input connections as well. (Normally used for German routing equipment connected to an expansion board 4583 input 0.)

FAULT: FB Silence switch, control unit xx
Only valid in the New Zealand convention. New Zealand FB Silence Alarms Bulgin key (outside switch) is turned on, in control unit no. xx, i.e. from not activated to activated state.

FAULT: Fire brigade panel xx, control unit xx
FBP=1828 (Ext. Fire Brigade Panel) The ext. FBP xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Fuse on COM-loop x, control unit xx
Blown fuse F15 (Loop 0), F16 (Loop 1), F17 (Loop 2) or F14 (Loop 3) on the main board 5010, in control unit no. xx. Fuse T**1.6A** L 250V (TR5). **NOTE!** The fuse should **not** be replaced. The main board 5010 shall be replaced, since more components are damaged as well.

FAULT: High current consumption, control unit xx
The control unit current consumption is > 3.3A (> 6.3A in alarm state) and because of this, the battery charging is turned off and will be so until the current consumption has decreased to ≤ 3.3A (≤ 6.3 A) again.

FAULT: Interlocking input AAA-PP
An interlocking input is not activated within the time set for fault activation (5-255 seconds). The time is counted from the activation of the output in the interlocking combination, area AAA / point PP.

FAULT: Internal short circuit, COM-loop x control unit xx
Short-circuit on the connection (ribbon cable) to or between the expansion boards (458x) in the control unit xx (FT1020G3).

FAULT: L-C mixed COM-loop x, control unit xx
The two wires L (SA) and C (SB) for COM-loop no. x (0-3), in control unit no. xx, have been mixed (alternated). Check / correct the wire connections.

FAULT: Loop unit zone: xxx address: xx technical number xxxxxx
The unit (not a detector) is not working properly, i.e. the unit may be faulty. The unit has to be replaced.

FAULT: Low battery capacity, control unit xx
Battery (in control unit no. xx) internal resistance > 1 Ω. • The battery may be too old. • Cables, fuses etc. for externally placed batteries may cause a voltage drop. • Check / adjust the power supply voltage (24 V DC). • Check the charging voltage over the battery respectively (13.5-13.8 depending on the actual charging step). • Check the voltage over a disconnected battery (fully charged ≥ 13 V). • **In the New Zealand convention only**: The battery charging is turned off 60 minutes every 24th hour to perform auto battery test. A battery voltage < 24.4 V during these 60 minutes will generate a fault. If a fault is generated it will automatically be **Serviced** after these 60 minutes. The battery should normally be replaced. ***NOTE:*** *The battery check is performed every 12th hour, i.e. it can take up to 12 hours until the fault status will be "corrected".*

FAULT: Low voltage, control unit xx
System voltage < 21 V DC, in control unit no. xx. Check the power supply output voltage, which shall be 24 V DC. Replace power supply if required.

FAULT: Low voltage, output unit xxxxxx
System voltage < 21 V DC in the external power supply unit 3366. Check the power supply output voltage, which shall be 24 V DC. Replace power supply if required.

FAULT: Mains, control unit xx
The fault is activated 1-300 minutes[48] after: • Loss of mains, i.e. no 230 V AC • Blown mains fuse. • Blown fuse F1 on main board 5010. Fuse T**6.3A** H 250V (5x20 mm ceramic).

FAULT: Mains, external power supply, control unit xx
This is valid for external power supply equipment, which has a fault output connected to a programmable **input** in the FT1020G3 system. The fault is activated 1-300 minutes[48] after the **input** is activated. • Loss of mains, i.e. no 230 V AC to the ext. power supply equipment. • Blown mains fuse. • Check the programmable input connections.

FAULT: Mains, output unit xxxxxx
This is valid for the external power supply unit 3366 and the addressable 2 voltage outputs unit 3364, connected on the COM loop. The fault is activated within 1-300 minutes[48] after: • Loss of mains, i.e. no 230 V AC to the **3366** unit. • Blown mains fuse. • Fuse F1 blown on the 3366 unit's charger board 3367. Fuse T**5A** L (5x20 mm). • 3364 unit: ☞ Terminal no. 8 (/Mains OK) not connected to the 3366 unit (J7:4) or 0 V. ☞ "No mains signal" from the 3366 unit.

[48] The time is programmable via WinG3. Default value depends on convention.

FAULT: Multiple faults, COM-loop x, control unit xx
Break (cut-off) **/** short-circuit in more than one segment on the COM loop, in control unit no. xx.

FAULT: Network cables mixed control unit xx
In a redundant TLON Network, Network 0 cables and Network 1 cables are mixed. Check the network installation / connections.

FAULT: No connection with MMI board, control unit xx
This fault message cannot be shown in the control unit's display, only via EBLWin, via Web-server and in other control units in the system. Fault in the MMI board 5011 software or the MMI board. Check the cable between the boards. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: No reply, expansion board x, control unit xx
Valid for the 8 zones exp. board 4580, the 8 relays exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in the control unit no. xx. • FT1020G3 cannot communicate with the board. Check / change the address. Check the cables / connections. • Check if the Main board fuse F13 is blown. Fuse: T**4A** L 250V (TR5).

FAULT: No reply expansion board x loop x control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x in the control unit no. xx. • Check the board's address, i.e. the I/O Matrix board no. (Jumpers JP1, JP2 and JP3 on the board). • Check if the board is disconnected from the loop.

FAULT: No reply zone: xxx address: xx technical number xxxxxx
The unit cannot be found by the control unit. • Check the unit's COM loop address (with the programming tool 3314). • Check the downloaded site specific data (SSD). • The unit might be faulty.

- The detector may be removed from its base.
- There may be a double break or short circuit on the COM loop.

FAULT: No reply, alert annunciation unit xx, control unit xx
FAULT: No reply, external presentation unit xx, control unit xx
Alert Annunciation Unit 1736. External Presentation Unit 1728 • The contact with the unit is interrupted. Check the cable, all connections, etc. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings. • Check if the Main board fuse F19 is blown. Fuse: T**1.6A** L 250V (TR5). • If there is a program memory fault in the unit, there will be a fault message, shown briefly in the unit's display during start up: **"Memory fault in program area (n)"** (n=1 or 2). The unit will not work.

FAULT: Printer, control unit xx
This is valid for an FT1020G3, with printer. Control unit no. xx. • Faulty printer • Printer not correctly connected. • No paper. • Printer selected in EBLWin but no printer mounted in the C.I.E. and vice versa.

FAULT: Read/write site data (SSW), control unit xx
SSW = the data that is changed during operation, i.e. week average sensor values, access codes, calibration values and event logs, in control unit no. xx. • If the C.U. was powered down (i.e. mains and battery disconnected) without first doing a Safe shut down of control unit via menu H8/S6 (see page 143), this fault may be generated when the C.U. is powered again. After fault acknowledge the SSW will get default values and the fault will be corrected (serviced). Supervised outputs have to be calibrated via menu H5/A1. • Some external influence has caused a fault in the SSW. This is very serious. Call for service personnel/engineer.

FAULT: Restart control unit nn, code xx, address yyyyyyyyyy
A restart has occurred in control unit no. nn. SSD and S/W download will automatically be followed by a restart. Also, you can manually do a restart, see chapter "Restart", page 90. The following restart codes are due to some external disturbance and are not normal, i.e. call for service personnel / engineer: xx=01: Watchdog Reset. xx=02: Accidental jump to reset vector. xx=04-19: Unexpected interrupt. xx=20: S/W monitoring fault xx=13 will always be followed by an address (yyy....), which is important to write down. yy…y = memory address (before restart). Write down the address and inform the service personnel/engineer.

FAULT: Short circuit loop x, control unit xx, SCInn<->SCInn
SCI **nn** <-> SCI **nn** describes between which **S**hort **C**ircuit **I**solators 4313 the short-circuit is located. **nn** = A, B, 00, 01, 02, 03, 04, 05, 06, 07 - - 63. A & B is the built-in isolator in the FT1020G3. A-direction and B-direction respectively. If no SCI is used the information will always be: SCI **A** <-> SCI **B** If one SCI (no. 0) is used, the information will be: SCI **A** <-> SCI**00** or SCI**00** <-> SCI **B** ...and so on. There will also be a "FAULT: No reply ….." message for each unit not found by the C.I.E. If there are several short-circuits on the loop the message shows the isolator just before the break in the A-direction (incl. the following isolators). There will also be shown “FAULT: Multiple faults …”. ***Note:*** *Each 10th minute a check is performed if all short-circuits are corrected (repaired). If so, the communication automatically returns to communicate in the A-direction only*[49]*.*

FAULT: Sensor zone: xxx address: xx technical number xxxxxx
The analogue smoke, heat or multi detector is faulty. The detector's built-in self verification function has reported a fault. The detector has to be replaced.

[49] Note: The fault has to be acknowledged i.e. it can remain up to 10 minutes after the acknowledgement before the communication returns to communicate in the A-direction only.

FAULT: Site specific data (SSD), control unit xx
The Site Specific Data (SSD) in control unit no. xx is not downloaded correctly (a checksum fault, etc.). A new SSD download (via EBLWin) is required.

FAULT: Site specific data, alert annunciation unit xx, control unit xx
FAULT: Site specific data, external presentation unit xx, control unit xx
Alert Annunciation Unit 1736 . Ext. Presentation Unit 1728. There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Supervised input x expansion board x, control unit xx
A fault on the supervised input x on the expansion board 4583 with address x, in control unit no. xx. Check the cables / connections (cut-off or short-circuit).

FAULT: Supervised output x, control unit xx
If the output is programmed for **sounders** (type "Alarm devices"), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking. If the output is programmed for **fire brigade TX** (type "Routing equipment"), it is also indicated by LED **Fault / Disablements** "Fire brigade TX" (L12) blinking. If the output is programmed for an **extinguishing system** (type "Extinguishing"), there will be an additional information text close to the soft key area in the display: Extinguishing wire fault. **x=0** (S0): Short circuit/break on the connected cable/ equipment and/or blown fuse F4 on the main board 5010. **x=1** (S1): Short circuit/break on the connected cable/ equipment and/or blown fuse F5 on the main board 5010. **x=2** (S2): Short circuit/break on the connected cable/ equipment and/or blown fuse F6 on the main board 5010. **x=3** (S3): Short circuit/break on the connected cable/ equipment and/or blown fuse F7 on the main board 5010. • Fuse T**500mA** L 250V (TR5). • Calibration not performed via menu H5/A1. • Connected equipment might be "missing". • End of line resistor(s) missing or not correct value (1-5 resistors 33K)

NOTE: *The calibrated value has to be in the range 4K7-50K.*

FAULT: Supervised output x expansion board x, control unit xx
A fault on the supervised output x on the expansion board 4583 with address x, in control unit no. xx. If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking. If the output is programmed for fire brigade TX (type Routing equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade TX" (L12) blinking. Calibration not performed via menu H5/A1. • Short-circuit / break on the connected cable / equipment. • Blown fuse F1 (Output 0) or F2 (Output 1) on the 4583 board. Fuse T**200mA** L 250V (TR5). • Connected equipment may be "missing". • End-of-line resistor(s) missing or not correct value, 1-5 resistors (33K). ***NOTE:*** *The calibrated value has to be in the range 4K7-50K.*

FAULT: Supervised output x, technical number xxxxxx
This fault message is valid for a COM loop output unit 3364 output. If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking. If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking. • Calibration not performed via menu H5/A1. • Short-circuit / break on the connected cable / equipment. • Connected equipment might be "stolen". • End-of-line capacitor(s) missing or not correct value, 1-5 capacitors (470 nF). ***NOTE:*** *The calibrated value has to be in the range 470 nF – 5 x 470 nF (2350 nF).*

FAULT: Temperature sensor control unit xx
The sensor is not correctly connected or is missing.

FAULT: TLON-board 1590 (Network 0), control unit xx

FAULT: TLON-board 1590 (Network 1), control unit xx
TLON connection board 5090. No communication / connection with the TLON network. The board for Network 0 or 1 in control unit no. xx has to be replaced.

FAULT: Wrong information, control unit xx
Can be shown in conjunction with new software download and/or when commissioning a system. This fault can be generated due to a bad TLON network, i.e. communication problems. One or more control units may have data stored that is not the same in all control units. If a control unit restarts in conjunction with this fault, a synchronisation will start automatically, otherwise a synchronisation has to be started via menu H8/S8 (or via EBLWin). ***NOTE:*** *It is important that all control units that are supposed to exist (SSD downloaded via EBLWin) are running and are connected to the TLON network. The TLON network programming has to be done. It will take 90-120 seconds until this fault is corrected.*

FAULT: Wrong type expansion board x loop x control unit xx
This is valid for the I/O Matrix board 4582 no. x connected on COM loop x in the control unit no. xx. Check the board type, set with jumpers JP4 and JP5 on the I/O Matrix board. The type should be the same as it is programmed via EBLWin.

FAULT: Wrong type, expansion board x, control unit xx
Valid for the 8 zones exp. board 4580, the 8 relay outputs exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in control unit no. xx. Check the type of board, which should be the same as programmed via EBLWin.

FAULT: Wrong type of unit zone: xxx address: xx technical number xxxxxx
Check the type of unit, which should be the same as programmed via EBLWin.

FAULT: Zone line input, xxx-xx input x, expansion board x, CU xx
Valid for the 8 zones exp. board 4580 zone line input x (xxx-xx = zone

– address). The board is mounted in control unit xx. Break on the zone line, wrong / no end-of-line device / short-circuit (if not programmed for fire alarm at short-circuit).

FAULT: Zone line input, zone: xxx address: xx technical number xxxxxx
Valid for the Multipurpose I/O unit 3361 monitored zone line input Z. Break on the zone line or wrong / no end-of-line capacitor (470 nF) or short-circuit (if not programmed for fire alarm at short-circuit).

No contact with main board
Shown only in the affected control unit. • Check that "MMI board" is selected in the SSD (Control unit properties). • Fault in the Main board 5010 software or hardware. Check the cable between the Main board and MMI board. This is a very serious fault. Call for service personnel/engineer immediately. • In conjunction with SSD download: Erase the SSD in the control unit and download the SSD again.

(External fault; User programmable text)
Programmable input is connected to any external equipment's fault output. User definable fault message (≤ 40 characters) has to be programmed via EBLWin. Note, The prefix "**FAULT:**" will **not** be automatically added.

17.2 Fault acknowledge

The LEDs **Routing equipment** "Fault TX activated" (L13) and **Fault / Disablements** "General fault" (L9) are turned on[50], (LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade TX" (L12) may be turned on as well.

- Output(s) for routing equipment (Fault TX) is (are) activated.
- Output(s) for general fault is (are) activated.
- Output(s) for general charger fault may be activated.
- One or more fault messages including date and time are shown in the control unit display.

If **Fault latching** is selected in EBLWin (default), once the fault is corrected, the "Serviced" message will be shown after the time i.e. the fault is already serviced / corrected.

Example: Fault messages shown in the control unit display:

```
FAULT: No reply zone: 123 address: 01
technical number 000025
05-02-2013   15:22        serviced

FAULT: No reply zone: 123 address: 03
technical number 000027
“Ground Floor East Wing”
05-02-2013   09:25

FAULT: No reply zone: 234 address: 01
technical number 002112
“First Floor corridor”
05-02-2013   15:25

Number of not ackn. faults in system: 3
```

To acknowledge the faults shown:

- Login, according to chapter "Access", page 94.
- Use **menu H6** (access level 2A) for fault acknowledge, see chapter "FAULT Acknowledge (H6)", page132. Menu H6 is a list showing a maximum of 300 faults (not acknowledged faults and/or acknowledged but not serviced / corrected faults).
- All faults have to be individually acknowledged one by one by the key pad button ↵ . Use ▲ or ▼ to scroll.

[50] Indicating that output for routing equipment (Fault tx) is activated.

- If a fault has been corrected before it has been acknowledged, the text "Serviced" is added after the time, still has to be acknowledged to remove it on the display.
- When a fault is corrected / serviced and acknowledged, it will disappear from the list (H6).
- When **all** faults have been acknowledged, the output for routing equipment (Fault TX) will not reset and the LED for **Routing equipment** "Fault TX activated" (L13) remains activated until there are no faults in the system[51].
- As long as there are faults still not corrected in the system, the LED **Fault / Disablements** "General fault" (L9) will be lit and general fault (and maybe general charger fault) output(s) are activated. The fault relay also stays energised.
- Faults, corrected faults and acknowledged faults are shown in the General event log (menu H4/U6).

[51] The fault outputs will not reset in the Australian and New Zealand conventions even if all faults have been acknowledged.

18 Commissioning an installation

18.1 General

No connection, other than the mains power supply should be made, prior to checking the operation of the C.I.E.

Mains power should be turned on and charger voltage levels checked / set. If these levels are correct, batteries can then be connected.

Basic operation of the C.I.E. should be confirmed, ensure no earth fault shown on the LCD.

Note: *To avoid getting earth fault when connecting a PC to FT1020G3, it is strongly recommended that a USB isolator be used. If no isolator is used and if there are several earth faults in the system when a PC is connected, damages may result on both PCBs and the PC.*

The only "fault" seen by the system, which cannot be fixed at this time, should be "Cut-off COM-loop x, CU xx". This is due to the C.I.E MCP being wired back to the loop via Class B wiring (no loop return wiring used). NZ control panels are normally not fitted with MCP on the outer door but it may be fitted with fire brigade mimic display or Bulgin keys.

Before connecting any other cables, the battery supply and mains power must be turned off.

Cable resistance readings and field connections must then be checked to ensure they are correct prior to their connection to the C.I.E.

Tip! Measure the resistance of each loop wire (L & C respectively) before turning on the power. Check that the L-wire (SA) that goes out on terminal J5:1 comes back at terminal J5:3 and so on. If the loop has short circuit isolators, only the C-wire (SB) can be measured. Also measure the resistance between the loop wires and 24V, 0V and Earth (J2:1, 2 and 3). The resistance should be very high (mega ohm).

18.2 Single Control Unit

1. Connect the incoming mains power feed to the GPO, ensure the mains isolator switch is "OFF".
2. Turn "ON" the incoming mains power from the circuit breaker in the switch board.

   NOTE: *It should be connected to a household removable fuse for the fire alarm C.I.E. only, via a two-way circuit breaker.*
   The mains cable should be securely clamped and the wires shall be as short as possible[52]*. The mains safety earth (ground) should, however, be longer than the other wires, to ensure that it is the last to be disconnected if the mains cable clamp should fail.*

[52] Cable tie should be mounted to keep the mains wires well separated from the 24 V DC wires

After the installation, the lid protecting the power supply screw terminals should be correctly applied.

3. Remove the battery fuse F2 on the main board 5010.
4. Connect the batteries to the battery leads.

   NOTE: *An in-line fuse (F) rated 6.3A fitted on the cable between the batteries, see drawing F725-02 FT1020G3 Block Wiring Diagram.*
   CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY INCORRECT TYPE. DISPOSE USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
5. Turn “ON” the mains isolate switch (230 V AC)[53]
   NOTE: *The control unit will be supplied pre-wired, the installer has to connect the incoming mains to the GPO only.*
6. Re-place the battery fuse (F2) on the main board 5010.
7. LED "Operation" (L5) indicate that the 24 V DC power supply is okay (PSU and/or battery).
8. An automatic restart will now take place (see chapter "Restart", page 90).
9. The site specific data (SSD) – created in EBLWin - can now be downloaded, see chapter "Programming (SSD download)Programming (SSD download)", page 83.
10. See also chapter "Calibration of supervised outputs (H5/A1)", page 124.

Note:

*A “**Safe shutdown**” must be performed once FT1020G3 is cleared of all faults and the system becomes in normal operational mode.*

18.3 Control Units in a TLON network

The FT1020G3 system can be build up as a single TLON Network or as a redundant TLON Network, i.e. 2 networks (dual path).

In the **single TLON Network**, one TLON connection board (5090) has to be plugged in each control unit (Network no. 0) whereas in the **redundant TLON Network**, two connection boards (5090) have to be plugged in each control unit.

Note*: Single TLON network is used only to network 0 when additional 5010 board is to be fitted inside the same enclosure otherwise a redundant TLON network is used i.e. two TLON boards 5090 must be used in each control panel. A single TLON Network is a violation to the Australian standard AS1670.1.*

The redundant TLON Network supports full functionality in case of a network path failure, i.e. open circuit or short circuit in one of the TLON networks.

When the 5090 boards are in place and the network cables are connected[54], **for each control unit**, follow the same procedures as for a single control unit, see 1-10 above.

When all control units are powered, the TLON network installation (see below) has to take place **before** the site specific data (SSD) can be downloaded, see chapter "Programming (SSD download)", page 83.

[53] The control unit is supplied with a GPO which has the mains isolate switch and a power point outlet used during programming to connect the power cable of your PC.

[54] The TLON connection board is mounted on the main board 5010. Network cable connections are made on the main board 5010, terminal block "J4".

If you know that one or more of the control units are to be started-up later, do as follows:

- In EBLWin, create the SSD only for the control units that shall be connected now. Wait to download the SSD until the TLON Network installation is ready.
- In TLON Manager, perform the TLON Network programming for the project, i.e. only the control units that shall be connected now.
- When the TLON Network installation – see below – is ready, download the SSD.

Later, when one or more control units should be added to the TLON Network:

- Open the project in TLON Manager, add the control unit(s) and install (download) it according to the separate TLON network documentation.
- Open the SSD in EBLWin and add the control unit(s) and download the SSD to all control units.

18.3.1 TLON network installation

A project (a system with two or more control units) is created in the PC program **TLON Manager** (or has been created earlier). A PC is connected to the modular connector "J10" (Network no. 0) in the control unit (main board 5010). Open the project in **TLON Manager** and install (download) the project, see separate TLON network documentation.

In a redundant TLON system a PC is connected to the second modular connector "J11" (Network no. 1) and the same procedure as for Network no. 0 is repeated for Network no. 1.

NOTE: After the TLON Network installation (download) is completed, it is highly recommended to restart the control units.

18.4 Add a Control Unit in a TLON network

When adding a control unit to a "existing" installation, the same software (S/W) version must be used in all control units. Often the new control unit has a newer version than the existing control units. Normally the latest version is the best to use, i.e. the control units in the "existing" installation have to be upgraded. As an alternative, it is possible to download an earlier S/W version in the new control unit. Both options are described in chapter "New system program (S/W) version download", page 86.

Open the current project in **TLON Manager**, add one control unit and install (download) it according to the separate TLON network documentation. Also see 18.3.1 above.

Open the SSD for the current system in EBLWin. Add one control unit (and the units connected to it) and download the new SSD according to chapter "Programming (SSD download)", page 83.

18.5 Make two TLON networks one.

It is very important that two or more presentation numbers (Zone or Zone-Address) in the systems are not the same. The system properties have to be the same.

Use one of the systems, e.g. the largest then, add to it the control units etc. from the other system.[55]

If it is known from the beginning that two systems shall be one in the future, it is possible to give the control units in the system respectively, the "final" control unit numbers right from the beginning in order to get the correct technical numbers in the system documents.

NOTE: *Two or more presentation numbers (Zone or Zone-Address) in the systems must not be the same.*

18.6 Delete a Control Unit in a TLON network

Physically disconnect the control unit. This action will generate faults in the other control units. Acknowledge the faults.

Open the current project in **TLON Manager**, delete the control unit according to the separate TLON network documentation.

Open the SSD for the current system via EBLWin. Delete the control unit (and the units connected to it) and download the new SSD according to chapter "Programming (SSD download)", page 83.

[55] It is not possible to merge two TLON Networks into one or copy one system and paste into another system.

19 SSD Download

Note: An EBLWin USB key must be used in order to perform SSD download using EBLWin V2.x.x.

The PC program **EBLWin** is used for creating the Site Specific Data (SSD) and to download it into the FT1020G3 control unit(s) and/or display units 1728, 1736 units.

The EBLWin key is a protection USB device required to log on to the control unit, it has a unique number. The EBLWin key identification number will be registered in the control panel event log with the date and time stamp for every SSD download performed in the control panel.

When the installation is ready, i.e. all units connected and the power is turned on, the SSD download can take place. When a number of control units are connected in a TLON network, the network should be running before the SSD download can take place.

To log on to an FT1020G3 (version ≥ 2.0) a **User name** and **Password** are required. Log on to FT1020G3 control panel with access level 3A (service personnel) as shown in Table 13 page 32.

First time to logon FT1020, a default access level “0” is shown. Type the default logon password “000000” then different access codes and passwords can be set in EBLWin (System | User data). The new access code and password will take place once the SSD is downloaded.

The PC has to be connected to the USB port (type "B") in one control unit. Start EBLWin and open the required installation. Log on to the control unit via the PC (EBLWin).

***NOTE**:*

No password / access code is required to log on to the control unit, instead an EBLWin key is required. This key is plugged in a USB-port in your PC.

In EBLWin (menu "Tools" | "Download SSD..."), you can select the unit(s), i.e. the control units as well as the Display Units, to which the SSD should be downloaded. After the SSD download the control unit will restart. A number of faults may then be generated, e.g. due to control units not connected yet. This will cause "heavy traffic" on the network, which may affect (delay) the SSD download to the other units. It is however, in the COM loop Properties, possible to select the option "Disable at start up". The COM loop will then be disabled directly after the download restart and therefore no faults will be generated.

NOTE:
A COM loop "Disabled at start up" can be re-enabled via menu H8/S1 but it will be disabled again after next restart. Finally the SSD for that control unit has to be downloaded again with the option "Disable at start up" not selected.

19.1 Check Loop

In the EBLWin COM loop icon pop-up menu select "Check Loop". This function can be used after (or before) the SSD download. The check loop function enables the control unit to find all units that are connected on the COM loop. If there is a break (cut-off) or

short circuit on the loop, only the units found in the A-direction will be shown, i.e. an indication where the break (cut-off) or short circuit is located.

For all units, the address (1-255) and the type of unit will be reported to EBLWin. All differences compared to the EBLWin SSD will be listed in EBLWin and can be saved and/or printed out.

NOTE: *During this check loop operation, the COM loop will be disconnected (disabled) and no alarms or faults can be activated. Disconnected COM loop is indicated by the LED* ***Fault / Disablements*** *"General disablements" (L10).*

19.2 Auto generate loop

The units connected to the selected COM loop will be identified by EBLWin and added to the COM loop with default auto generated settings, which can be edited before the download of the SSD to the control unit takes place.

19.3 SSD download to Single Control Unit

Start the SSD download from EBLWin. A text message will be shown in the control unit display “Downloading SSD”.

When the download is completed, the control unit will restart (see chapter "Restart", page 90. After the restart, another text message will be shown in the display:

FAULT: Restart control unit nn, code 03 DD-MM-YYYY HH:MM

Code 03 indicates a normal restart after the SSD download that is ok. Acknowledge the restart fault.

If the download was unsuccessful, another fault will be generated.

FAULT: Site specific data (SSD), CU nn DD-MM-YYYY HH:MM

This text message means that the SSD file has **not** been downloaded properly, i.e. a new download has to be performed.

19.4 SSD Download to Control Units in a TLON network

The SSD for all control units can be downloaded via a PC (EBLWin), connected to one control unit. The download will be performed to the control units, one at a time, according to chapter "Single Control Unit" above. The download is performed in a consecutive order, i.e. 0-1-2-3-4-……-29 amongst the selected control units **but** the control unit where the PC is connected will automatically be the last one to get the SSD downloaded.

When the SSD download to a control unit is completed, that control unit will automatically restart, see chapter "Restart", page 90.

19.5 User definable text messages download

Each alarm point, zone and zone line input should have a unique user definable alarm text programmed via **EBLWin**. When a fire alarm is activated (e.g. an addressable

alarm point), the presentation number (Zone - Address) will be shown in the control unit display (see “Presentation number” page 46) as well as in the external presentation 1728 and alert annunciation 1736. There will also be shown a user definable alarm text, if programmed.

All user definable text messages, up to 40 alphanumeric characters each, are created and downloaded (included in the site specific data – SSD) via **EBLWin**.

The user definable text messages will be printed out when a printer is available.

A Fault message for an alarm point, zone or zone line input will also show the text message (V2.0.0 or higher).

20 Download Software (system firmware)

The latest software (S/W) version of the EBL512G3 system program is factory downloaded before delivery. Due to continual development and improvement, different S/W versions may be found.

The valid S/W version for the Main board 5010 and the MMI board 5011 respectively, can be read in menu H4/U8 (information) or via EBLWin. On site, new S/W can be downloaded via EBLWin.

Every FT1020G3 has one Main board 5010 and one MMI board 5011. If the front display is not required e.g. TLON network inside same enclosure, the FT1020G3 will not have a second MMI board 5011.

On site, new S/W for 1728, 1736 units can also be downloaded via EBLWin. See the "Technical Description" for each unit respectively.

20.1 Single control unit

A single C.I.E. **should not** have a TLON connection board 5090 mounted. (When a C.I.E. has a TLON connection board 5090 mounted, it is expected to be one C.I.E. in a TLON network and TLON network programming is required.)

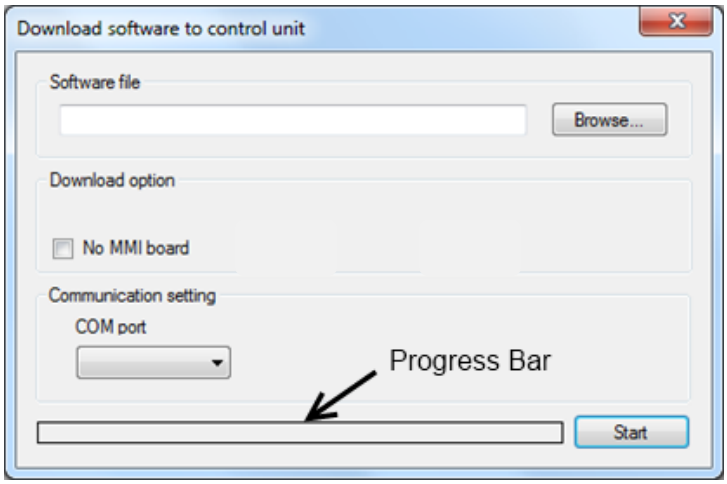
To download a new software (system firmware) version, a PC and **EBLWin** are used. The BIN file that should be downloaded contains software for the main board 5010, software for the MMI board 5011 and a text file, i.e. there is one BIN file for each convention.

20.1.1 Establish communications between the PC and C.I.E.

Note: *Brooks strongly recommends using the USB isolator device when you connect your PC to the control unit.*

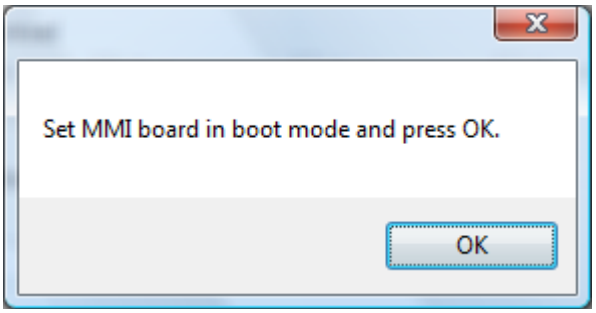
The following procedures must be performed to establish the communications between the PC and the control panel:

1. Connect the PC to the USB connector in the C.I.E.
2. Start EBLWin, **no logon required**
3. In the "Tools" menu, select "Download Software…" to open the dialog box.
4. Select the path and the software file name, e.g. ***Australian_EBL512G3_200.BIN*** (200 = version 2.0.0).
5. Mark the checkbox "No MMI board" if the control panel is not fitted with front display, i.e. the MMI software and the text file will **not** be downloaded.
6. Select the COM port to be used on your PC.

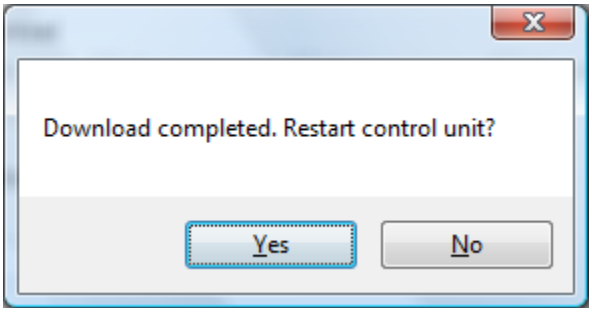


20.1.2 Download Software

1. Set the Main board 5010 in "boot" mode, i.e. press and hold the "Boot" button (SW2) then press the "RESET" button (SW1) momentarily. Release the "BOOT" button. The Main board LED "D24" is turned off while the Main board is in "boot" mode.
2. Start the download, i.e. click "Start".
   LED "Operation" (L5) will be turned off.
   LED **Fault / Disablements** "General fault" (L9) is turned on, indicating that FT1020G3 is in the "boot" mode.
   LED "System fault" (L7) will be turned on.
   If the FT1020G3 is fitted with front, another dialog box opens,



3. Set the MMI board 5011 in "boot" mode, i.e. press and hold the "BOOT" button (SW2) and press the "RESET" button (SW1) momentarily. Release the "BOOT" button. The MMI board LED "D18" will be turned off while the MMI board is in "boot" mode.
4. Click "OK", the buzzer is turned off and the download continues. The download status is indicated by the progress bar.
5. When the progress bar goes from "red to green", the download will be completed and the following dialog box opens:



6. Click "Yes" and the control unit will restart. Regarding the restart, see also chapter "Restart", page 90.
7. LED "Operation" (L5) will be turned on and all other LEDs will be turned off.

20.2 Control Units in a TLON network

All control units connected to a TLON network must have the same software version.

To download new software in each control unit, follow the procedures described above.

Since some control units do not have contact with other control units during the downloading, the following faults may be generated:

FAULT: Control unit xx has no contact with control unit xx, network x dd-mm-yyyy hh:mm

FAULT: CU xx has wrong information dd-mm-yyyy hh:mm

The faults must be acknowledged.

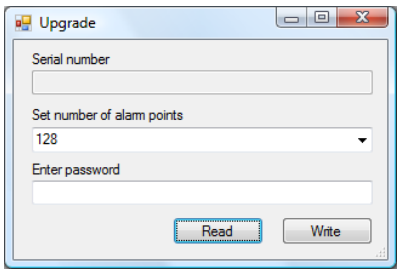
21 Upgrade number of alarm points

All FT1020G3 settings are normally factory downloaded before delivery. It is however, possible to upgrade the maximum number of **alarm points** (512 → 1024) on site. ***Note:*** *The maximum number of COM loop addresses is always 1020, i.e. address 1 – 255 on each COM loop.*

Note: *Standard FT1020G3 C.I.E is supplied with 512 addresses except when a request to upgrade the number of addresses is received before manufacturing.*

If you require upgrading the number of addresses, a PC and **EBLWin** are used. Before download, the PC has to be connected to the USB connector in the control unit and the hardware key is also plugged in. Open EBLWin and the installation where the upgrade to be performed and follow the procedures below:

1. Logon (Tools | Log on Control unit...)
2. Select the control unit icon, right click and in the pop-up menu select “Upgrade number of alarm points”. A dialog box opens.

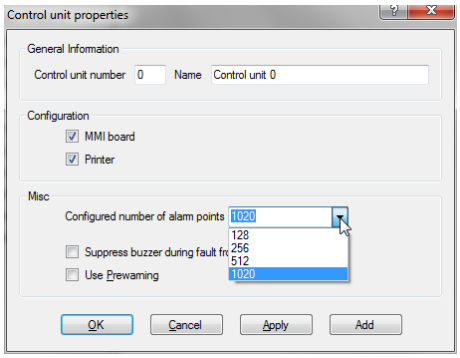


3. Click "Read" to get the valid data from the control unit you are connected to.
4. Report the **Serial number** to Brooks head office in order to get the password.[56]
5. Write the new number of alarm points and the received password in the field respectively and click "Write".

Follow the same procedure in each control unit if a TLON network requires upgrade.

After you enter the password, right click on the respective Control Unit icon and choose “Properties”. The Control Unit Properties dialog box opens:

Depending on the upgrade password you received, under the “Misc” section, the “Configured number of alarm points” will be made available.



Note: *All control units connected to a TLON network do not have to have the same max. number of alarm points set.*

[56] To upgrade the maximum number of alarm points, a special PC program is used to generate a password. The password will be unique for every serial number and number of alarm points combination.

22 Restart

A restart may delete some data in FT1020G3 e.g. SSW, WASV, etc. Below is an explanation of the different data and abbreviations, also Table 14 shows how the data is affected (**cold** or **warm restart**).

FF = **F**ire alarms and **F**aults.

D = **D**isablements

FFD = **F**ire alarms, **F**aults and **D**isablements.

SSW = Sensor min. / max. values & performance factor, access codes, supervised output calibration values and event logs.

WASV = **W**eek **A**verage **S**ensor **V**alues

SSD = **S**ite **S**pecific **D**ata, i.e. all the installation programming created and downloaded via EBLWin.

S/W = Software, i.e. the EBL512 G3 system program.

Safe shut down of control unit (menu H8/S6) will save the **SSW** data in a Flash ROM **before you power down FT1020G3**. Before the first "Safe shut down" of the control unit, this memory is empty. After each "Safe shut down" the latest SSW data is saved. When FT1020G3 is powered up, a restart takes place and the RAM (working memory) will read the SSW data saved in the Flash ROM.

The date & time and alarm counter value is stored in the memory of the real time clock, i.e. the value will be retained also after the C.I.E. has been switched off.

NOTE: *After any restart, a new* ***week average sensor value*** *will be calculated within two minutes for all the analogue smoke sensors. During these two minutes all fire alarms from analogue smoke sensors will be suppressed. Thereafter a new average sensor value will be calculated each week.*

Table 14 describes the different reset alternatives and how the data respectively is affected.

Table 14 Data affected by restart

Action	Data, etc. which will be deleted	Data, etc. which will be not deleted	Restart code
Power down[57] and then **power up** again. ("Cold restart")	SSW FFD, WASV	SSD, S/W	00
Via menu H8/S6 Safe shut down of control unit. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	00 alt. 03
Via **RESET** button on Main board and MMI board respectively.[58]	FFD, WASV	SSD, S/W, SSW[59]	
Reset command via EBLWin or TLON Manager.	FFD, WASV	SSD, S/W, SSW	
Automatically after download of site specific data (SSD) via a PC & EBLWin. ("**Warm restart**")	FFD, WASV	SSD, S/W, SSW	03
Automatically after download of S/W via a PC & EBLWin. ("Cold restart")	FFD, WASV	SSD, S/W[60], SSW	00 alt. 03
Automatically due to external disturbance.[61] ("Cold restart")	FFD, WASV	SSD, S/W, SSW[62]	01, 02 alt. 04-20

NOTE: *During a restart, the fault output (relay) for the Fault TX will be "activated" for few seconds, the supervised 24 V DC outputs S0-S3 will not bet supervised and S0-S3 programmed as normally high will be low.*

During the "restart", no fire alarm will be activated and the following is shown in the display:

And after a few seconds, the control panel starts the normal restart procedures else a Memory fault is shown. The normal restart procedures display and the memory fault display are shown below:

Booting.....

[57] Both mains power supply and battery disconnected.
[58] First press the **RESET** button on Main board momentarily then the **RESET** button on MMI board momentarily.
[59] If in the middle of a process, also the SSW may be deleted.
[60] The old S/W will be deleted.
[61] If this happens, call for service personnel / engineer.
[62] Depending on the restart reason, also the SSW may be deleted.

Booting.....

A **fault** will be generated and the following text message will be shown in the display and the buzzer will sound:

FAULT: Restart control unit nn, code xx, address yyyyyy

Regarding code **xx** and address **yyyyyy**, see “Fault messages” page 63. This fault is also indicated by LEDs **Routing equipment** "Fault TX activated" (L13) and **Fault / Disablements** "General fault" (L9).

After the fault is acknowledged (via menu H6 or EBLWin), the LEDs will be turned OFF, if no other faults exist in the system.

After any restart, the FFD (fire, fault & disablement) will be deleted, if any units was disabled before restart, an individual disablements for these unit should be done.

Memory fault

In case of a fault in the Main board 5010 S/W (system program) or the MMI board 5011 S/W, the following fault message may be shown:

FAULT: Checksum system program, control unit xx

(Main board software.)

FAULT: Checksum MMI program, control unit xx

(Main board software.)

FAULT: No connection with MMI board, control unit xx

(Not shown in the display, only via EBLWin or the Web-server.)

No contact with Main board

This is also indicated by LED "System fault" (L7) and the buzzer sounds steady (continuous). The Fault TX output is "activated".

A new download of the S/W (system programs) is required and/or the Main board and/or the MMI board have to be replaced.

NOTE:

*After **SSD download** - see chapter "Download Software (system firmware)", page 83, the following messages may be shown:*

Checksum fault in downloaded data. Control unit will now restart.

After restart:

FAULT: Restart control unit nn, code xx, address yyyyyyyyy

FAULT: Site specific data (SSD)

This means that the SSD have **not** been (correctly) downloaded.
A new SSD download has to be performed.

23 Access

To use the key pad in the control unit (to get access to the menu tree), it is necessary to **logon** with a **User name** and a **Password** for level 2A, 2B or 3A. See also chapter “User level, User name & Password” page 32 .

Open the the control unit door (= level 1), press the soft key "Menu" (P5) and continue as follow:

Action	Text in display	Comments
	 FT1020G3 Control Unit: XX User definable text. User definable text. dd-mm-yyyy hh:mm Menu	Door open. **XX** = 00 – 29 **day-month-y**ear **h**our:**m**inute Soft key "Menu".
"Menu"	Log in as: 0 Information only 1 Building officer 2 Service personnel	0,1 and 2 are default. More users may be in the list, if programmed via EBLWin.
Enter 0, 1 or 2 e.g. "2"	Service personnel Password:	If you enter "0" no password is required. The digits will be replaced by ****** in the display.
Enter the password (six digits)	Service personnel Password: *****	
	NO ACCESS!	No access will be shown if the password was not correct. Try again.
"2", "Password" (six digits)	 ▒▒▒ menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change password	If the password is correct a main menu list is displayed. Press "↲" to accept (menu H1) **or** scroll / jump to the required menu (H2-H10) and press "↲". **NOTE!** The menu list will be different for user levels "Information only" and "Building officer".
	Escape menu	

Explanation:

The above table has 3 sections as follow:

1. **Action** (in the table) = use push button / key (e.g. "↲").
2. **Text in display** (in the table) = what is shown in the control unit display.
3. **Comments** (in the table) = Comments to the text in the "Action" and "Text in display" columns.

Use "▲" and "▼" to scroll between the main menus H1-H10.
Use "↲" ("Enter") to accept.

Some main menus have sub menus. Use "▲" and "▼" to scroll between the sub menus (e.g. B1-B9). Use "↲" to accept.

NOTE: *The menus are circular, i.e. if you scroll with "▼" and the last menu is reached, the first menu comes up next.*

Quick jump can be used within each menu, e.g. in menu H1 press "6" for a quick jump to menu H6. ("1" and then "0" within 1 sec. = 10).

In some cases a cursor appears e.g. Disable zone: 000
It is then possible to type in digits with the numeric keys 0 – 9.

Use "◄", "►", "▲" and "▼" to move the cursor in a menu.
Use "**ESC**" to return from a sub menu to the main menu (H1-H10) or from a main menu to leave the menu system.

Use the soft key "**Escape menu**" (when it is available) to leave the menu system from any menu.

Note: *no text above a soft key = the key is not available (i.e. it has no function).*

You will be automatically logged out 15 minutes after the last action (i.e. if the key pad or a push button has not been used for 15 min.) and directly when you close the door. A new login is then required.

If you leave the menu system without closing the door, you have access to the menu system again only by using the soft key "**Menu**". A new login is not required.

Some lists are dynamic lists, i.e. the number of items per page depends on the size of each item.

Some lists are static lists, i.e. a fixed maximum number of items per page.

NOTE*:*

In the following chapters all the menus are described.

The "Text in display" column shows the essential text and may **not look exactly** as shown in the display.

24 Perform monthly test (H1)

The control unit and the installation shall be tested according to the Maintenance standard AS1851.

In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4.)

If a real fire alarm is activated, for example by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders or OWS) activated, routing equipment (fire brigade TX) activated, etc.

See also chapter "The information area priority order", page 30.

NOTE: *If the control unit door is left open, the output(s) for routing equipment (fire brigade TX) may be disabled (if set so in EBLWin)[63] however this function does not comply with the ASE standard.*

The test mode will be automatically terminated one hour after the latest alarm test.

See also chapter “Perform ZONE TEST (Test mode) (H7)", page 134.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
	H1 Perform monthly test	
"↲"	Check that all LEDs light up! Press ↲	
"↲"	[All dots are visible]	The buzzer (in the C.U.) sounds and all dots in the display are shown. All LEDs light up, including LEDs in units connected via I/O Matrix board 4582. If a printer is mounted in the C.I.E. it will print out: ABCDE……Z abcde……z
"↲"	Zones to be set in test mode: ??? ??? ??? ??? Start test: ↲	
Write zone numbers (e.g. 001, 002, 003, 004)	Zones to be set in test mode 001 002 003 004	Press "↲" to start the test mode.
"↲"	Zones in test mode: 001 002 003 004 End test: ↲	LED "Test mode" (L8) will light up. Perform the tests.

[63] It is prohibited in Australia to disable routing equipment via the door switch.

The zone(s) will **remain in test mode until the test mode is terminated**. The test mode is terminated in this menu or automatically one hour after the latest alarm test.

You will be automatically logged out 15 minutes after the latest "action" (using any of the keys) but the zone(s) will **remain in test mode until the test mode is terminated**, see above.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normal conditions.

In the tested alarm point, the built-in LED will illuminate and the LEDs "Fire" (L1) in the C.I.E. will illuminate for approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

Any detector in test mode will be unable to generate a fault.

After 15 minutes **or** "ESC" and "Escape menu"	Zone 001 in test mode Zone 002 in test mode Zone 003 in test mode Zone 004 in test mode *(NOTE! See chapter "*The information area priority order*", page 30, regarding priority order.)*	You are logged out but the zone(s) are still in test mode.
"Menu" Log in (see above), select menu H1, step down to this view.	Zones in test mode: 001 002 003 004 End test: ↵	Press "↵" to end test.
"↵"	Please wait....	
	Test of routing equipment?[64] No Yes	The LED "Test mode" is turned OFF.

Press "↵" (i.e. select "No") to bypass the routing equipment test. If so, the monthly test is completed, or
Press "▼" and "↵" (i.e. select "Yes") to start the test (not recommended). If so, the following will happen in the system:

- The C.I.E. "Fault tx" output will be de-activated (note that, this output is **activated** in normal state), indicated by the LED "Fault tx activated" (L13).
  60 seconds count-down starts.
- After 30 seconds, also the C.I.E. "Fire brigade tx" output (and corresponding programmable outputs type "routing equipment") will be activated, indicated by the LED "Fire brigade tx" (L3).
- After another 30 seconds, the test will be terminated and the outputs and LEDs will return to "normal".

"▼ and "↵"	Test of routing equipment in progress. nnn seconds left.	"nn" starts at 060 and will count down to 000.
	Monthly test is completed! Press ↵	
"↵"	▒▒ menu H1 Perform monthly test H2	Scroll to another menu or press "ESC".

[64] Prior testing the routing equipment, the ASE must be isolated or set to test mode.

NOTE_1: *During the test, the following information will be shown in all other C.I.E. displays:*

Zone 001 in test mode

Zone 002 in test mode

Zone 003 in test mode

Zone 004 in test mode

NOTE_2: *If an alarm point (e.g. a manual call point) is in alarm state when the test mode is terminated, there will not be a fire alarm activated.*

NOTE_3: When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.

25 Disable or re-enable (H2)[65]

A whole zone[66], one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B2. This function can be used for temporary disablement (e.g. building maintenance, etc.).

If the function **Enhanced disablement** is enabled (default), disabled alarm points cannot activate Pre-warning, fire alarm and fault.

If this function is not enabled (via EBLWin), disabled alarm points cannot activate Pre-warning and fire alarm but fault can be generated.

An Addressable manual call point can be disabled (normally should not be disabled). However, when a whole zone is disabled, the addressable manual call points will not be disabled for safety reasons. (This function is dependent on the convention)[67].

Up to 512 whole zones can be disabled via menu H2/B1.
Up to 200 alarm points (zones / addresses) can be **individually** disabled via menu H2/B1. COM loops, zone interface inputs and/or MIO inputs can be disabled via menu H8/S1. (Alarm points disabled via time channels are not limited and must not be counted!)
Up to 200 outputs can be **individually** disabled via menu H2/B2. Disabled output will stay in (or return to) the normal condition for the output respectively. (Collectively disabled outputs via menus H2/B3 – B4 are not limited and must not be counted).
Up to 200 Interlocking outputs can be **individually** disabled via menu H9/C3.

It is not possible to exceed the limits. A warning will be shown:

```
Max. disablements reached!
Disablement not performed.
```

Don't forget to re-enable (via menus H2/B1-B2, H8/S1, H9/C3 or use automatic re-enablement for zones and alarm points.

Disablements are listed in menus H4/U1 & U2 from which it can also be printed.

LED **Fault / Disablements** "General disablements" (L10) is indicating one or more disablements in the system.

Disablements are also shown in the display. An example:

```
Zone 001 disabled
dd-mm-yyyy   hh:mm

Zone 002 address 01 disabled
dd-mm-yyyy   hh:mm

....

Number of disablements in system:  2
```

NOTE: See chapter "The information area priority order", page 30, for priority order.

Disablements (and faults) are indicated by a 2-sec. beep when you close the CU door.

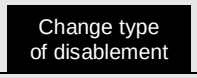
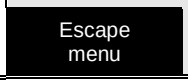
[65] The word “Disable” or “Re-enable” is used in the Australian convention while “Isolate” and “De-Isolate” are used in the New Zealand convention.
[66] When the zone disable module is used, a whole zone can be disabled without entering the menu.
[67] Currently, the function has not been implemented in the Australian convention.

25.1 Zone or zone address (H2/B1)

When a whole zone is disabled, all alarm points within the zone are disabled.

Alarm points can be individually disabled

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	- Via **menu B1,** a Zone or an alarm point (Zone / Address) can be disabled. - A time for automatic re-enablement can be set. - Disabled zones and alarm points are shown in a Re-enable list.
"↲"	Disable Zone 000 Automatic re-enable: No Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **Zone** 000 and **Zone** 000..**address** 00.
"Change type of disablements"	Disable Zone 000 address 00 Automatic re-enable: No Change type of disablement	Write the zone number and address. To set an automatic re-enable time press "▼" and "►". Write the time (default is current time + 3 hours). Press "↲" to disable, which will be indicated with "√" and a beep. The zone will be automatically shown in the Re-enable list
Write the zone number and address (e.g. 003, 01). "▼" "►"	Disable Zone 003 address 01 √ Automatic re-enable: No Yes, at 17:05 -- Re-enable list (1) ---------- Zone 003 address 01 auto. re-enable at 17:05	If the specified zone / unit is not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|"

"↲"		to toggle between **Disable** and **Re-enable list**.
"→|"	Disable ---------- Zone _ _ _ address _ _ Automatic re-enable: No Re-enable list (1) Zone 003 address 01 autom. re-enable at 17:05 	Select in the Re-enable list "▼" (in this example there is only one item) and press "↲". Re-enabled zone or zone / address will disappear from the list, indicated with a beep.
"↲"	Disable Zone 000 address 00 Automatic re-enable: No 	Disable (or Re-enable) another Zone, Zone / Address or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function 	Scroll to another menu or press "ESC" or "Escape menu".

NOTE:

The sensor values for disabled analogue smoke detectors in NORMAL mode will not be used for calculation of the week average sensor value, i.e. only the values saved before and after the disablement will be used for this calculation.

25.2 Output (H2/B2)

All programmable outputs in the C.I.E. and outputs in units connected to the COM loops (**except outputs of type "Alarm device"**) can be individually disabled.

If you try to disable an output of type "Alarm device" it will be treated as if it does not exist, see below.

Disabled output: Even if its control expression (trigger condition) is fulfilled (true), the output will not be activated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B2.	B2 Output	Via menu B2, a loop unit output, C.U. output S0-S3 / R0-R1 and exp. board 4581 output can be disabled.
"↲"	Disable output Loop unit 000000 output 0 Change type of disablements	Use the soft key "Change type of disablements" to toggle between: **Loop unit output** **Control unit output S** **Control unit output R** **Exp. board output** Write loop unit technical number and output number and press "↲" to disable, which will be indicated with "√" and a beep. The output will be automatically shown in the Re-enable list

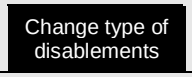
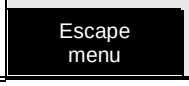
Write loop unit technical number and output number, (e.g. 000001 and 0). "↲"	Disable output Loop unit 000000 output 0 √ -- Re-enable list (1) ---------- Loop unit 000001 output 0 →| Change type of disablements	If the specified output does not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	Disable output ---------- Loop unit _ _ _ output _ Automatic re-enable: No Re-enable list (1) Loop unit 000001 output 0 →| Change type of disablement	Select in the Re-enable list with **"▼"** (in this example there is only one item) and press "↲". Re-enabled output will disappear from the list, indicated with a beep.
"↲"	Disable output Loop unit 000000 output 0 Change type of disablements	Disable (or Re-enable) another output or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

25.3 Output type (H2/B3)

All outputs of type "Control", "Ventilation", "Extinguishing" and Interlocking can be collectively disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

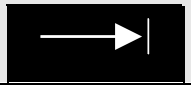
Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B3.	B3 Output type	Via menu B3, outputs of the same type can be collectively disabled in selected control unit or all.
"↲"	Disable output type Control outputs in Control unit 00 All Change type of disablements	Use the soft key "Change type of disablements" to toggle between: **Control** **Ventilation** **Extinguishing** **Interlocking** Write control unit no. when required. Press "↲" to disable which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable output type Control outputs in Control unit 00 All √ -- Re-enable list (1) ---------- All control outputs	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable output type ---------- Control outputs in Control unit 00 All Re-enable list (1) All control outputs 	Select in the Re-enable list with "▼" (in this example there is only one item) and press "↲". Re-enabled type will disappear from the list, indicated with a beep.
"↲"	Disable output type Control outputs in Control unit 00 All 	Disable (or Re-enable) another type or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function 	Scroll to another menu or press "ESC" or "Escape menu".

25.4 Alarm devices (H2/B4)

All outputs of type "Alarm device" can be collectively disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B4.	B4 Alarm devices	Via menu B4, outputs of type "Alarm device" can be collectively disabled in a selected control unit or all control units.
"↲"	Disable All alarm devices	Press "↲" to disable, which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable All alarm devices √ -- Re-enable list ---------- All alarm devices 	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable ---------- All alarm devices Re-enable list All alarm devices 	Press "↲" to re-enable. Re-enabled type will disappear from the list, indicated with a beep.
"↲"	Disable All alarm devices	Disable (or Re-enable) another type or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm device B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

25.5 Routing equipment (H2/B5)

Disabled outputs are listed in menu H4/U1 from which it is possible to get a print-out.

Outputs for routing equipment (fire brigade tx and fault tx) can be disabled and re-enabled via this menu. Can be useful during an installation and test period, when only local alarms are required.

Disabled output for routing equipment is indicated by LEDs Fault / Disablements "General disablements" (L10) and "Fire brigade tx" (L12).

Disabled output will stay disabled until re-enabled again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B5.	B5 Routing equipment	Via menu B5 the standard outputs (fire and fault) for routing equipment can be disabled.
"↲"	Disable Routing equipment Fire Fault	Use "◄", "►"to toggle between: **Fire** **Fault** Press "↲" to disable, which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable routing equipment Fire Fault √ -- Disabled routing equipment ---------- Fire alarm routing →|	Use the soft key "→|" to toggle between **Disable** and **Disabled**.

"→|"	Disable routing equipment ---------- Fire Fault Disabled routing equipment Fire alarm routing 	Press "↲" to re-enable. Re-enabled routing equipment will disappear, indicated with a beep.
"↲"	Disable Routing equipment Fire Fault	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

25.6 Alert Annunciation (H2/B6)

Normal function:

The **AA** function For alarm points / zones programmed for **A**lert **A**nnunciation (via EBLWin) is normally enabled via a time channel, e.g. enabled daytime (during working hours) and disabled night time.

As an alternative, the **AA** function can be continuously enabled (always on).

The **AA** function can be disabled via this menu (H2/B6) i.e. the **AA** function will be turned off for the alarm points / zones programmed for Alert Annunciation in spite of the time channel is "on" or if they are programmed to be continuously enabled.

The **AA** function will remain off until re-enabled again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B6.	B6 Alert annunciation function	Alert Annunciation function can be disabled via menu B6
"↲"	Disable Alert annunciation	Press "↲" to disable, which will be indicated with "√" and a beep. The disablement will be automatically shown in the Re-enable list
"↲"	Disable Alert annunciation √ -- Re-enable list ---------- Alert annunciation off →|	Use the soft key "→|" to toggle between **Disable** and **Re-enable**.

"→|"	Disable ---------- Alert annunciation Re-enable list Alert annunciation off 	Press "↲" to re-enable. Alert annunciation off will disappear from the list, indicated with a beep.
"↲"	Disable Alert annunciation	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

26 Set calendar and clock (H3)

The real time clock (RTC) component has a capacitor as a backup supply. When the control unit is turned on for the first time[68], only the date, time and day of the week required to be set. Upon the completion of the commissioning work, the clock must be checked and corrected if required, so that the "time stamps" for event log is correct.

The calendar and clock can be set in any C.I.E. for the whole system. Every day (at midnight) the calendar and clock will be synchronised.

NOTE: *If no changes required, press "ESC" instead of "↵" to return to menu H3.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H3.	H3 Set calendar and clock	
"↲"	DD=MM-YYYY hh:mm Monday Tuesday Wednesday Thursday Friday Saturday Sunday	The date & time shown is valid when this menu is opened. If required, change the date, time and/or weekday (press "▼" or "▲" to select the weekday). The "clock" starts again as from the date, time, etc. *shown in the display* when you press "↲". **If no changes required, press "ESC" instead of "↲".**
"↲"	H3 Set calendar and clock	Scroll to another menu or press "ESC".

[68] The capacitor can supply the RTC for a couple of days. When the power is turned off, it is recommended to check / set the date and time in menu H3.

27 Present system status (H4)

If a printer is mounted (an option for control unit FT1020G3), it is possible to get a print-out from some of the menus. In this case, the soft key "Print" (P6) is used.

NOTE: *During printing, "Print" will be replaced with "Abort printing". When "Abort printing" is pressed the soft key text immediately changes back to "Print" but the items that has already been stored in the buffer will be printed (up to five items).*

27.1 Disablement (H4/U1)

This is a dynamic list of all disablements in the system. A disabled **zone** programmed with address 00 will be displayed as ZZZ-00. Disablements by time channels are listed in menu H4/U2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All disablements in the system, except disablements by time channels, will be shown in menu U1. Press "↲".
"↲"	Zone XXX address XX disabled dd-mm-yyyy hh:mm Zone XXX is disabled Automatic re-enable hh:mm dd-mm-yyyy hh:mm Alarm points disabled by time channel in control unit XX dd-mm-yyyy hh:mm .... Disablement 1 to 3 of 7 Print	If there are no disablements --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". (Information is shown about disablements by time channels.) If a printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U1 Disablement	Scroll to another menu or press "ESC".

27.2 Disablement by time channel (H4/U2)

A static list (4 items per page) of all disablements by time channel(s) in the system.

NOTE: *All other disablements are listed in menu H4/U1.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All disablements by time channels, will be shown in menu U2. Press "↲".
Scroll to menu U2.	U2 Disablement by time channel	
"↲"	Zone XXX address XX disabled by time channel Zone XXX address YY disabled by time channel. .... Number of disablement by time channel: 2	If there are no disablements --List is empty-- will be shown. It is a static list (up to 4 items per page) in which you can scroll with "▼" or "▲".
"ESC"	U2 Disablement by time channel	Scroll to another menu or press "ESC".

27.3 Open doors (H4/U3)

If any door in the system is open, the door open symbol is shown in the symbol area of the display.

See also chapter "Open door" page 44.

This menu is a dynamic list of all open doors in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All open doors in the system will be shown in menu U3. Press "↲".
Scroll to menu U3.	U3 Open doors	
"↲"	Door open control unit 00 dd-mm-yyyy hh:mm Door open control unit 01 fire brigade panel 00 dd-mm-yyyy hh:mm .... Open door 1 to 2 of 2 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If a printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U3 Open doors	Scroll to another menu or press "ESC".

NOTE: *During printing, "Print" will be replaced with "Abort printing".*

27.4 Sensor values (H4/U4)

The "Momentary" value in this menu will be updated after every detector polling, i.e. approximately every 6 seconds.

The very first week average sensor value for the 430x and 440x detectors in NORMAL mode is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes, no fire alarm can be activated and "Weekly: 00.0%/m" will be shown. The "Weekly" value will thereafter be updated every week.

For the 440x detectors in Advanced mode the "Weekly" value is 00.0%/m on delivery. It will be updated the very first time after 13 minutes. Thereafter, it will be calculated every 13 minutes but then will only be changed downwards if required. After 18 hours it can be changed downwards or upwards and after additional 18 hours (36 hours in total) it can be changed downwards or upwards and it is also saved in the detector's EEPROM, i.e. that value will be used after the power is disconnected from the detector. The "Weekly" value for the 440x detectors in Advanced mode is also called the "Contamination Compensation Value (CCV).

The "Performance factor" and "Min. / Max." values are updated each night (00:00), i.e. the values shown are from the previous day.

"Algorithm" shows the algorithm currently in use.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U4.	U4 Sensor values	
"↲"	Start sensor: 000000	Write the technical number and/or press "↲" to start as from sensor 000001.
"↲"	*For an Analog multi detector **4300 / 4400** in **NORMAL mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: X-XX Max: XX.X%/m Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C	If there are no sensors (analogue detectors) when "↲" is pressed, the list view will not open. It is a list in which you can scroll with "▼" or

	*For an Analogue heat detector **3308 / 3309** in **NORMAL mode**:* Sensor: 001-03 (technical address 000002) Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C *For an Analogue multi detector **4400** in **Advanced mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: Xxxxxx Max: XX.X%/m Momentary: XX°C Min: XX°C Max: XX°C Print	"▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out.
"↲"	Start sensor: 000000	Write another technical number and press "↲" or press "ESC".
"ESC"	U4 Sensor values	Scroll to another menu or press "ESC".

NOTE! During printing, "Print" will be replaced with "Abort printing".

27.4.1 Performance factor:

$$\frac{\sum_{m=0}^{14400} |X_m - X_{wa}|}{14400} = Pf$$

The Performance factor can be 0.00 – 2.55. How the Performance factor (Pf) is calculated is shown to the left.

The Performance factor is normally close to 0.00, which means that the detector is mounted in a "stable" environment. The momentary sensor values during 24 hours do not differ a lot from the week average sensor value.

X_m = momentary sensor values for 24 hours.

X_{wa} = weak average sensor value

14400 = pollings during 24

In an "unstable" environment, the Performance factor will be higher than 0.00. This could for example be the case in a factory (e.g. "dirty" activities during working hours – no or clean activities during the night) and is not a problem as long as there are no nuisance (false) alarms or other problems.

27.4.2 Algorithms

Table 15 shows the algorithms and the abbreviations respectively:

Table 15 Algorithms and abbreviations in normal mode

Algorithm Detectors 3308/3309, 430x and 440x, all in NORMAL mode.	**Abbreviation** [69]
Normal sensitivity (3%/m) & Normal detection (**15** s)	**N-15**
High sensitivity (2.4%/m) & Normal detection (15 s)	H-15
Low sensitivity (3.6%/m) & Normal detection (15 s)	L-15
Normal sensitivity (3%/m) & Slow detection (35 s)	N-35
High sensitivity (2.4%/m) & Slow detection (35 s)	H-35
Low sensitivity (3.6%/m) & Slow detection (35 s)	L-35
Heat algorithm, Class A1	**A1**
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec[70]

Default is N-15 and A1 respectively.

Table 16 Algorithms for 4400 in advanced mode

Algorithm Detector 4400 in Advanced mode.	**Abbreviation**
Normal area	**Normal**
Clean area	Clean
Cooking-Welding area	Welding
Heater area	Heater
Smoke-Steam area	Smoke

Default is Normal.

Table 17 Algorithms for 4401 in advanced mode

Algorithm Detector 4401 in Advanced mode.	**Abbreviation**
Normal area	**Normal**
Clean area	Clean
Smoke-Steam area	Smoke

Default is Normal.

[69] If some other short name is required, it can be changed in EBLWin. Up to six characters can be used.
[70] Analogue multi detector 4300 only.

27.5 Sensors activating SERVICE signal (H4/U5)

When SERVICE signal is generated in the system, the search symbol is shown in the display's symbol area

Regarding the SERVICE signal levels, see Technical Manual, chapter "SERVICE signal".

Menu H4/U5 is a list of the sensor(s) activating SERVICE signal.

NOTE: *SERVICE signal provides only information to indicate that the sensor has to be replaced soon with a new/clean sensor. After the replacement, the SERVICE signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S2)", page 139.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U5.	U5 Sensors activating SERVICE signal	
"↲"	Sensor, Zone ZZZ address AA needs service technical number xxxxxx 14-03-2013 09:09:15 Sensor, Zone ZZZ address AA needs service technical number xxxxxx 14-03-2013 19:09:35 Number of sensors: 2 Print	If there are no sensors activating service signal, --List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U5 Sensors activating SERVICE signal	Scroll to another menu or press "ESC".

NOTE: *During printing "Print" will be replaced with "Abort printing".*

27.6 Technical warning (H4/U6)

A technical warning is an event that is neither a fire alarm nor a fault. It is information to indicate that an event has occurred as a result of activating a programmable input. The text message, shown in the C.I.E. display, is user definable message (up to 40 characters). One or more activated technical warnings are indicated by in the display's symbol area.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↵"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U6.	U6 Technical warning	
"↵"	Technical warning text message 19-02-2013 09:09:15 (User definable text message) 19-02-2013 19:09:35 1 to 2 of 2 Print	If there are no technical warnings, -- List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U6 Technical warning	Scroll to another menu or press "ESC".

Notes:

During printing, "Print" will be replaced by "Abort printing".

Technical warnings can be used to activate programmable output.

27.7 Event log (H4/U6)

Three event logs (3 x 999 events) are available:

- Alarm log (alarm events, e.g. fire alarm, fire alarm reset, etc.)
- Interlocking log (only interlocking events)
- General event log (all other type of events)

The origin of the event, e.g. **CU00** (see below), may be originated from **EBLWin**, **WebG3** or **Ext#** (External system no. # connected via Web-server).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U7.	U7 Event log	
"↲"	Select event log: Alarm log Interlocking log General event log	Use "▼" or "▲" to select a log. (e.g. the "Alarm log".)
"↲"	Command: Reset all alarms 19-02-2013 09:25:30 CU00 FIRE ALARM zone 123 address 45 19-02-2013 09:09:15 CU00 FIRE ALARM zone 123 address 46 19-022013 09:07:01 CU00 Event 15 to 13 of 21 Print	If there are no events, --List is empty-- will be shown. The list is dynamic in which you can scroll with "▼" or "▲". The most recent event is on top of the list. If printer is mounted, the soft key "Print" will be visible. Press "Print" to select and print the events during the latest **hour, day, week, month** or **All**. Scroll with "▼" or "▲" to view more events.
"ESC"	U6 Event log	Scroll to another menu or press "ESC".

NOTE: *During printing, "Print" will be replaced with "Abort printing".*

27.8 Information (H4/U8)

This menu can be used to show the following information for the specific control unit you currently use:

Main board version: The S/W (software / firmware / system program) version downloaded to the Main board 5010.

MMI board version: The S/W (software / firmware / system program) version downloaded to the MMI board 5011.

Alarm counter: The alarm counter is increased with "1" every time the C.I.E. enters a real "fire alarm condition" (i.e. fire alarm indication in the display, LEDs "Fire" are illuminating and the C.I.E. buzzer is sounding). Alarms from zones in test mode will not be counted. The alarm counter starts at 000 and goes to 999. It can be reset to 000 via EBLWin (Control unit menu "Reset alarm counter…"). The value will be retained also after the C.I.E. has been completely powered off.

Max. number of allowed alarm points that can be used in this control unit, i.e. 512 or 1024. (Configured number of alarm points.)

Serial number: The manufacturer's serial number (year YY, week WW, number of the main board NNN) used e.g. when upgrading max. no. of allowed alarm points.

Control unit number: 00-29.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U8.	U8 Information	
"↲"	Main board version: 2.0.0 MMI board version: 2.0.0 Alarm counter: nnn Max number of allowed alarm points: xxx Serial number: xxxxxxx Control unit: NN Print	If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out.
"ESC"	U7 Information	Scroll to another menu or press "ESC".

28 Service (H5)

Menu H5 can be used to display certain information to help during commissioning an installation or maintaining existing system (e.g. when you power on and when you are programming a control unit / system).

Only authorised personnel have access to the level 3A menus and a p**assword for level 3A (Service technician)** is required.

Via a PC[71] and EBLWin you can:

- download / backup (upload) the site specific data (SSD)
- create and download software (S/W), settings, configurations, control unit and system properties.
- create and download the user definable text messages (alarm texts) shown in the display in the control unit and Display units (if used).

NOTE:

To be able to log on to an FT1020G3 C.I.E. via a PC using EBLWin, the PC has to be provided with an EBLWin key (5094). This USB device has a number (a key) required for the log on.

Via a PC[72] and **TLON Manager** you can create and download (install) the TLON network configuration (TLON project).

[71] Connected to the "USB" connector in the front panel.
[72] Connected to the modular connectors J10 (TLON network 0) or J11 (TLON network 1) on the main board 5010.

28.1 Calibration of supervised outputs (H5/A1)

Supervised (monitored) outputs;

- Voltage outputs (S0-S3) in each control unit.
- Voltage outputs (VO0-VO1) in the COM loop output unit 3364.
- Voltage outputs (0-2) on the I/O exp. board 4583.

When all alarm devices (sounders, etc.) are connected, including required end-of-line devices[73] and when the SSD is downloaded, a **calibration** of the supervised outputs must to be performed.

Function: The calibrated range is 4K7 – 50K and 470 – 5x470 nF respectively. If the actual value at any time differs from the calibrated value ± a small tolerance or if the calibrated value is outside the calibration range, a fault will be generated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
"↲"	Start calibration of supervised outputs (press ↲)	
"↲"	Calibration completed successfully √	
"ESC"	A1 Calibration of supervised outputs	Calibration is ready. Scroll to another menu or press "ESC".

NOTE: *After the calibration is completed, it is recommended to do a "Safe shut down of control unit (H8/S5)" page 143. This will save the SSW data (e.g. the calibration values) in a Flash ROM.*

[73] Control unit outputs S0-S3 and 4583 outputs 0-1: One end-of-line resistor (33K) in the last unit or one resistor (33K) in up to five units.
3364 outputs (VO0-VO1): One end-of-line capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

28.2 Sensitive fault detection mode (H5/A2)

During commissioning, the "Sensitive fault detection mode" can be used to enable the technician to detect the faults faster than normal mode. The time delay for each fault will then be reduced, i.e. you may find some faults now instead of later on.

When the "Sensitive fault detection mode" is turned on, it is indicated by the LED **Routing equipment** "Fault TX activated" (L13), "Fault" output for routing equipment is "activated" and the search symbol appears in the symbol area of the display.

NOTE: *Don't forget to turn off this mode after the commissioning.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A2.	A2 Sensitive fault detection mode	
"↲"	Sensitive fault detection mode is not active Press ↲to activate	
"↲"	 Sensitive fault detection mode was activated Press ↲to deactivate	
"↲"	Sensitive fault detection mode is not active Press ↲to activate	
"ESC"	A2 Sensitive fault detection mode	Scroll to another menu or press "ESC".

28.3 Service mode for COM-loop (H5/A3)

This mode can be used when commissioning an installation and during maintenance. The COM loop communication (polling) will be turned off but 24V DC still on the loop in the A-direction only, the B-direction only **or** in both directions at the same time.

A voltmeter can be used to check the voltage / voltage drop on different segments on the loop or to find a single break on the loop. (Since there is voltage on the loop, short circuit isolators will work normally).

It is recommended to do this check also when the power of FT1020G3 is supplied via the backup battery only, since the battery voltage can be different (compared with the power supply voltage) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED **Fault / Disablements** "General disablements" (L10). If you exit this menu, the "Service mode for COM-loop" will be terminated automatically.

NOTE: *If short-circuit is detected when a COM loop is in service mode, the loop will be disabled and a fault message will be displayed:*

FAULT: Short-circuit SCI A <-> SCI B**,** loop x, control unit xx

…independent of where the short-circuit is situated on the loop.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A3.	A3 Service mode for COM-loop	
"↲"	Service mode for loop: 0 CU: 00 A Direction B Direction Both	Write loop and control unit numbers. Use "▼" or "▲" to scroll to the required direction(s) and press "↲".
"↲"	Service mode control unit 00 COM-loop 0 Supplied from A-direction only	When you leave this menu by pressing "ESC" or "↲" the service mode will be terminated, i.e. the communication will return to the normal modey.
"ESC" or "↲"	A3 Service mode for COM-loop	Scroll to another menu or press "ESC".

28.4 Display current consumption in unit (H5/A4)

Control unit: The total current consumption (including the charging current at 24V) for the selected control unit (C.I.E.) when it is connected to the mains (230 V AC), i.e. this function is not working when the mains is switched off.

Charging: The battery charging current for the selected control unit (C.I.E.). Also battery temperature and "low capacity voltage" will be shown. [74]

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A4.	A4 Display current consumption in control unit	
"↲"	Select control unit: : 00 (press ↲)	Write control unit number and press "↲".
"↲"	Please wait.....	
	No reply from control unit.....	If the control unit is not exist or doesn't respond.
	Current consumption in control unit 00: From rectifier: xxxx mA Charging: xxxx mA (battery temperature xx°C) Low capacity voltage diff: xxxxx mV [74]	
"↲" or "ESC"	A4 Display current consumption in unit	Scroll to another menu or press "ESC".

[74] During the battery capacity check the voltage is measured with and without a resistor. A difference between these two voltages > 700 mV will result in a "Low battery capacity" fault.

28.5 Display current consumption COM-loop (H5/A5)

The current consumption (an average value) for each COM loop can be displayed.

NOTE: *very small current consumption (< 10 mA) cannot be presented correctly / precisely since the accuracy is ±5 mA.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A5.	A5 Display current consumption on COM-loop	
"↲"	Display current consumption on COM-loop: 0 control unit: 00 (press ↲)	Write loop number and control unit number and press "↲".
"↲"	Please wait.....	
	No reply from control unit.....	If the control unit is exist or doesn't respond.
	Current consumption on COM-loop: 0 control unit 00 is xxxx mA	The current consumption accuracy is ±5 mA.
"↲" or "ESC"	A5 Display current consumption on COM-loop	Scroll to another menu or press "ESC".

28.6 Display statistics for communication (H5/A6)

The statistics can be used during commissioning, service, etc.

Number of pollings is the number of pollings / "questions" sent out by the control unit to all the units connected on the COM loop.
Parity fault is the received number of parity faults and % (faults in relation to pollings).
Number of bit faults is the received number of bit faults and % (faults in relation to pollings).
No answer is the received number of answer faults / no answers and % (faults in relation to pollings).

Bit length fault is the received number of bit length faults and % bit length (faults in relation to the pollings.

The number of Parity faults, Number of bit faults, No answer and Bit length faults should be normally "0" or as close to "0" as possible. If not, there are some communication problems that have to be investigated. Check the COM loop, connections and the loop units.

All values are set to "0" after restart and/or after re-connection of COM loop (via menu H8/S1).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A6	A6 Display statistics for communication	
"↲"	Display statistics for COM-loop: 0 control unit: 00	Write loop number and control unit number and press "↲".
"↲"	Please wait.....	
	No reply from control unit.....	If the control unit is not exist or doesn't respond.
	Number of pollings: nnnnnnn Parity fault: 000000 00.0% Number of bits fault: 000000 00.0% No answer: 000000 00.0% Bit length fault: 000000 00.0%	Note: The values are not live updated.
"↲" or "ESC"	A6 Display statistics for communication	Scroll to another menu or press "ESC".

28.7 Activate address setting mode for DU (H5/A7)

This function can be used by commissioning / service technicians to activate the address setting mode in the following Display Units connected to the C.I.E.:

- External Presentation unit 1728
- Alert Annunciation units 1736

A specific unit or all units connected to one C.I.E. can be activated for address setting.

NOTE: *The units should be in operation and in quiescent condition, i.e. the units should already have an address.*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A7	A7 Activate address setting mode for DU	
"↲"	Activate address setting mode for DU: Control unit: 00, display unit: 00 All	Write control unit number, and the unit's address or press "►" to select "All" (i.e. all display units on the selected control unit).
"↲"	Address setting mode for display unit 00, control unit 00 activated	The address can now be edited in the display unit (DU) respectively.
"↲" or "ESC"	A7 Activate address setting mode for DU	Scroll to another menu or press "ESC".

The address is thereafter edited in the display unit (DU) respectively.

28.8 SSD information (H5/A8)

SSD name As written in the EBLWin dialog box "System Properties" (Name).

Downloaded Date and time when the SSD was downloaded.

User User name for the person who performed the SSD download.

Computer Computer name (if programmed) for the PC that was used for the SSD download.

Domain Domain (if programmed) for the PC that was used for the SSD download.

EBLWin key The unique number for EBLWin key.

Convention (i.e. country specific functions, default EBLWin settings, etc.) is set in conjunction with the installation of EBLWin [75].

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A8	A8 SSD information	
"↲"	SSD name: Xxxxxxxxxxxxxx Downloaded: yyyy-mm-dd hh:mm User: Nnnnnnn Computer: Ccccccccccccc Domain: Ddddddddddd EBLWin key: 1234567890 Convention: XXX Print	If printer is mounted the soft key "Print" will be visible. Press "Print" to print the SSD information.
"↲" or "ESC"	A8 SSD information	Scroll to another menu or press "ESC".

[75] To change the convention via EBLWin, "Level 2" has to be selected, which requires a special password. Alternatively, EBLWin can be re-installed.

29 FAULT Acknowledge (H6)

Regarding fault indication, etc., see chapter "Fault", page 61.

See also chapter "Fault acknowledge", page 77.

All faults and the status / action are stored in the event log and can be listed, see chapter "Event log (H4/U7)", page 121.

Up to 300 faults in menu H6 can be listed:

- Not corrected / serviced and not acknowledged faults (no status)
- Not corrected / serviced but acknowledged faults (acknowledged)
- Corrected / serviced but not acknowledged faults (serviced)

The most recent fault is shown on the top of the list

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H6.	H6 FAULT Acknowledge	
"↲"	FAULT: Low battery capacity, control unit 00 dd-mm-yyyy hh:mm FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) dd-mm-yyyy hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) dd-mm-yyyy hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	If there are no faults --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all faults during the latest: **hour** **day** **week** **month** **All** To acknowledge a fault, select it and press "↲". The selected fault has a boarder around it.

"↲"	FAULT: Low battery capacity, control unit 00 dd-mm-yyyy hh:mm /Acknowledged FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) dd-mm-yyyy hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) dd-mm-yyyy hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	A corrected / serviced fault that is acknowledged will disappear from this list.
"ESC"	H6 FAULT Acknowledge	Scroll to another menu or press "ESC".

30 Perform ZONE TEST (Test mode) (H7)

Zones can be tested via menu H1, refer to the maintenance standard AS1851 for more information in regards to the requirements. However, it is also possible to perform a zone test via menu (H7). Up to 100 zones can be set in test mode.

In test mode, only the alarm points are tested, i.e. no outputs (e.g. OWS or sounders) will be activated during the test (Alarm devices can be tested via menu H8/S4 and any output via menu H8/S8 or via EBLWin (when you are logged on).

If a real fire alarm is activated by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (OWS or sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "The information area priority order", page 30.

NOTE: If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) may be disabled (if set so in EBLWin)[76].

The automatic test mode will be terminated one hour after the latest tested alarm point. Valid for each zone respectively.

One or more zones in test mode are indicated by the LED "Test mode" (L8). The green polling LED in the 440x detectors will be turned off in test mode.

The zones are set one by one in test mode and the test mode has to be terminated for each zone one by one.

[76] Not recommended in the Australian convention

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H7.	H7 Perform ZONE TEST	
"↲"	Set in test mode Zone 000	
Write the zone number (e.g. 001). "↲"	Set in test mode Zone 001 √ -- End test mode ---------- Zone 001 	Press "↲" to start the test mode. Indicated by "√" and a beep. If the specified zone is not exist, it will be indicated with "X" instead of "√" and a beep. All zones set in test mode will be shown in the "End test mode" list. Use the soft key "→|" to toggle between **Set in test mode** and **End test mode list**.
"→|"	-- Set in test mode ---------- Zone _ _ _ √ End test mode Zone 001 	After the testing, select a zone in the "End test mode" list and press "↲". The test mode has to be ended for all zones.

The zone(s) will **stay in test mode until the test mode is terminated**. The test mode is terminated in this menu or automatically after one hour.

You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will **stay in test mode until the test mode is terminated**, see above.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normal.

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the C.I.E. will light up for approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

An alarm point in test mode will not be able to generate a fault. An alarm point "in alarm" when the test mode is terminated will activate a normal fire alarm.

"↲" for each zone to end the test mode.	Set in test mode Zone 000	No zones in test mode. Set new zones in test mode or press "ESC".
"ESC"	H7 Perform ZONE TEST	The LED "Test mode" (L8) is turned OFF. If more zones are to be tested, continue as above. If not, scroll to another menu or press "ESC".

NOTE_1: *During the test, the following information will be shown in all other C.I.E. displays:*

Zones 001 in test mode

Zones 002 in test mode

Etc.

NOTE_2: *If an alarm point (e.g. a manual call point) is in alarm state when the test mode is terminated, a fire alarm will be activated.*

NOTE_3: *When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.*

31 Maintenance (H8)

31.1 Password for service / maintenance

Only authorised personnel have access to level 3A menus (e.g. H8) and a **password for level 3A (Service technician) is required**.

31.2 Disconnect / Reconnect loop / zone line input (H8/S1)

Before physical connection / disconnection of loop units, etc. the loop (or zone line input) must be disconnected (voltage free) in order to avoid any damage to the units or the C.I.E., i.e. there will be no voltage on the "loop" or the zone line input.

Zone line input requires an 8 zones expansion board 4580 in the control unit or an Addressable multipurpose I/O unit 3361 connected on a COM loop.

One or more disconnected "loops" are indicated by LED **Fault / Disablements** "General disablements" (L10) and listed in menu H4/U1.

NOTE: *When you re-connect a COM loop all the statistics shown in menu H5/A6 will be erased and set to "0".*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	Via menu S1 a COM loop, a zone line input on expansion board and an addressable zone interface input can be Disconnected / Re-connected
"↲"	Disconnect COM loop 0, control unit 00 Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **COM loop** **Zone line input** (exp. board) **Zone interface input** (loop unit) to disconnect, which will be indicated with "√" and a beep.

Write COM loop number and control unit number. "↲"	Disconnect COM loop 0, control unit 00 √ -- Re-connect list (1) ---------- COM loop 0, control unit 00 →| Change type of disablements	The loop will be automatically shown in the Re-connect list. If the specified loop etc. is not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between the **Disconnect** and **Re-connect list**.
"→|"	-- Disconnect ---------- COM loop _, control unit _ _ Re-connect list (1) COM loop 0, control unit 0 →| Change type of disablements	Select in the Re-connect list with "▼" (in this example, there is only one item) and press "↲". Re- connected loop will disappear from the list, indicated with a beep.
	Disconnect COM loop 0, control unit 00 Change type of disablements	Disconnect (or Re-connect) another "loop" or press "ESC".
"ESC"	S1 Dis- / Re-connect loop / zone line input	Scroll to another menu or press "ESC".

31.3 Acknowledge SERVICE signal (H8/S2)

When SERVICE signal is generated in the system, the search symbol is shown in the display's symbol area. See also chapter "Sensors activating SERVICE signal (H4/U5)", page 119.

When service signal from a sensor (smoke detector) is acknowledged, the sensor is given a default week average sensor value (same as for a new / clean sensor, i.e. "1" = 0.1 %/m). **First** replace the sensor and **then** acknowledge the service signal **as soon as possible**. The first week average sensor value after acknowledge will be calculated within one hour, then each week.

NOTE: *If a sensor 430x and 440x in NORMAL mode is replaced without having generated service signal, it has to be reset to the default week average sensor value via menu H8/S3, page 141*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S2.	S2 Acknowledge SERVICE signal	
"↲"	Sensor, Zone ZZZ address AA needs service technical address xxxxxx 14-03-2013 09:09:15 Sensor, Zone XXX address AA needs service technical address xxxxxx 14-03-2013 19:09:35 Sensor 1/2 is selected Previous page / Next page	If there are no sensors -- List is empty-- is shown. This is a dynamic list in which you can scroll. The most recent service signal / sensor is shown on top of the list. Use "▼" or "▲" to select a sensor (the selected sensor has a border). Press "↲" to acknowledge the sensor.

"↲"	Sensor, Zone XXX address AA needs service technical address xxxxxx 20-02-2013 09:09:35 Sensor 1/1 is selected Previous page Next page	The acknowledged sensor disappears from the list. Continue as above or press "ESC".
"ESC"	S2 Acknowledge SERVICE signal	Scroll to another menu or press "ESC".

The "Service symbol" and the "Service message" will be turned off when all sensors have been acknowledged.

31.4 Clear weekly average (H8/S3)

If a sensor (analogue smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be cleared and set to the default value (i.e. “1” = 0.1 %/m), otherwise the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually via this menu.

***NOTE: First,** replace the sensor and **then** clear the week average value **as soon as possible**. Authorised service personnel only, must do this. Using the function incorrectly may cause nuisance fire alarms.*

The first week average sensor value (after clearing) will be calculated within one hour, then each week.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S3.	S3 Clear weekly average	
"↲"	Clear weekly average zone: 000 address: 00 (press ↲)	Write the required zone and address and press "↲".
Write the zone and address numbers, (e.g. 001 and 01). "↲"	Weekly average zone 001 address 01 cleared	
"ESC"	S3 Clear weekly average	Continue as above or scroll to another menu or press "ESC".

31.5 Test of alarm devices (H8/S4)

The programmable outputs[77] of type "Alarm device" can be collectively activated via this menu (H8/S5), which allows for the alarm devices to be tested. The test cannot be started if a fire alarm in the system already exists.

One or all control units can be selected. When the test starts, the alarm devices will sound continuously (steady) for approx. 5 seconds, be silent for approx. 25 seconds, sound for approx. 5 seconds and so on.[78]

NOTE: *Disabled and silenced alarm devices will also be tested.*

The test will continue for one hour if not stopped via this menu (H8/S4) or if a fire alarm is activated in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S4.	S4 Test of alarm devices	
"↲"	Test of alarm devices control unit: 00 All Press ↲ to start test.	Write control unit number or press "►" for "All". Press "↲" to start the test.
"↲"	Test of alarm devices, control unit 00 in progress. Press ↲ to end test	The test will continue for one hour if not stopped via this menu (S4) or if a fire alarm is activated in the system. Press "↲" to terminate the test.
"↲"	Test of alarm devices ended. Press ↲ to return to menu	
"↲"	S4 Test alarm devices	Scroll to another menu or press "ESC".

[77] Including Addressable siren 3377 /4477, Addressable sounder base 3379 and OWS.
[78] For the alarm devices 3377/ 4477 and 3379, the tone with the highest priority level (and type "alarm device") will be automatically selected.

31.6 Safe shut down of control unit (H8/S5)

It's not recommended to power down a control unit (i.e. no 230 V AC and no battery) without first performing a safe shut down of the control unit.[79] Safe shut down will save the SSW in a Flash ROM and put the CPUs at rest. See also chapter "Restart", page 90.

It's highly recommended to do a safe shut down after completing the commissioning of an installation and calibrating the supervised outputs, changing access codes etc. in order to save the new valid values, codes etc.

Safe shut down can be performed from any control unit and any control unit can be selected. A control unit without a front has to be shut down from another control unit.

NOTE: *By restart and power down, the Fault TX output(s) will be "activated".*

Action	TEXT IN DISPLAY	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S5.	S5 Safe shut down of control unit	
"↲"	Shut down control unit 00? No Yes	Write control unit number and press "▼" to select "Yes".
"▼" "↲"	Ready for shut-down, break the power. Automatic restart within xxx seconds! ***xxx*** *will start at 300 seconds and countdown to 000 before the control unit will restart automatically. During the countdown the buzzer will start sounding since the communication between the Main and MMI boards has stopped. (Can be silenced via push button "Silence buzzer".)*	The SSW is now saved and the Main board and MMI board CPUs are at rest. You can now power down the control unit. If not, the control unit will restart automatically after 300 seconds (5 minutes).

[79] If no safe shutdown performed, a fault ("FAULT: Read/write site data (SSW), CU xx") may be generated when you power up the control unit again.

Power off / Power on or after 5 min.	FAULT: Restart control unit 00, code 53, address 0 dd-mm-yyyy hh:mm /Serviced FAULT: Restart control unit 00, code 03, address 0 dd-mm-yyyy hh:mm /Serviced Fault 1/2 is selected Print | Previous page | Next page	After a restart (see page 90), two restart faults will be always exist. The code will be 00 / 50 after Power off / Power on restart and 03 / 53 after a countdown restart, address 0. This fault has to be acknowledged, see chapter "FAULT Acknowledge (H6)", page 132.

***NOTE**:*

prior the first *safe shut down,* the Flash ROM is empty. Then every time *safe shut down* is performed the valid data will be saved in the Flash ROM, i.e. any old data will be overwritten.

When the C.I.E. is powered up, the data stored in the Flash ROM will be used.

WARNING:

If *safe shut down* is **not** performed just before a C.I.E. power down, then when powered on, the Flash ROM may be empty (default setting will be used) or the stored data may be old / not valid.

31.7 Activate address in alarm mode (H8/S6)

One alarm point (zone-address), not a whole zone, can be set in alarm. The built-in LED in the alarm point (detector) will be turned on to indicate the alarm.

NOTE: *All outputs, standard and programmable, which would have been activated by a real fire alarm from the same alarm point, will now be activated.*

NOTE: *In all other control units, the alarm will be presented as a "Test mode alarm"*

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S6.	S6 Activate address in alarm mode	
"↲"	Select zone: 000 address: 00 (press ↲)	
Write the zone number and address (e.g. 123-45). "↲"	Select zone: 123 address: 45 (press ↲)	
"↲"	First alarm: 123-45 1 zone in alarm Latest alarm: 123-45 --- Select zone: 123 address: 45 (press ↲)	Press "ESC" to exit this menu. The fire alarm has to be reset as a normal fire alarm (press "Reset").
"ESC" "Reset"	S6 Activate address in alarm mode	Scroll to another menu or press "ESC".
	First alarm: 123-45 Alarm number 1(of 1) Test mode Zone Address 123-45 SMOKE Alarm text for 123-45 Menu	This manually activated fire alarm will be presented in the display of all control units and indicated by the LEDs "Fire" (L1) and "Fire brigade tx" (L4). This manually activated fire alarm must be reset by the push button "Reset" (P3)

31.8 Synchronise the control units (H8/S7)

After any control unit restart, synchronisation will start automatically.

Synchronisation can also be started via EBLWin and this menu (H8/S7).

The control units must be synchronised when the following fault message is shown:

FAULT: Control unit xx has wrong information.

During the synchronisation, there will be information displayed for all control units in the system.

↻ (rotating clockwise) = Synchronisation in progress for the control unit (CU).

√ = Synchronisation completed successfully for the control unit (CU).

<Blank> = Synchronisation failed for the control unit (CU).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S7.	S7 Synchronize the control units	
"↲"	Start synchronization? No Yes	Press "▼", to select "Yes". Press "↲" to start the synchronisation.

"▼" "↲"	Synchronisation in progress... CU00 ↻ CU10 ↻ CU20 ↻ CU01 ↻ CU11 ↻ CU21 ↻ CU02 ↻ CU12 ↻ CU22 ↻ CU03 ↻ CU13 ↻ CU23 ↻ CU04 ↻ CU14 ↻ CU24 ↻ CU05 ↻ CU25 ↻ CU06 ↻ CU26 ↻ CU07 ↻ CU17 ↻ CU27 ↻ CU08 ↻ CU18 ↻ CU28 ↻ CU09 ↻ CU19 ↻ CU29 ↻	During the synchronisation, the progress symbol for each control unit is shown. In the example shown, CU15 & CU16 are not programmed.
After a while.	Synchronisation completed dd-mm-yyyy hh:mm CU00 √ CU10 √ CU20 √ CU01 √ CU11 √ CU21 √ CU02 √ CU12 √ CU22 √ CU03 √ CU13 √ CU23 √ CU04 √ CU14 √ CU24 √ CU05 √ CU25 √ CU06 √ CU26 √ CU07 √ CU17 √ CU27 √ CU08 √ CU18 √ CU28 √ CU09 √ CU19 √ CU29 √	Date and time for the latest completed synchronisation. The symbol "√" means that the synchronisation process has been completed successfully. If the symbol "√" is missing, the synchronisation is failed.
"ESC"	Start synchronization? No Yes	
"ESC"	S7 Synchronize the control units	Scroll to another menu or press "ESC".

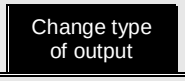
31.9 Activate / Reset outputs (H8/S8)

Any output can be activated, i.e. the function can be tested (Can also be done via EBLWin).

The selected output will be activated no matter if the control expression is true or not.

The selected output will be reset only if the control expression is false (not true). If the control expression is true when you reset the output via menu H8/S8, the output will remain activated until the control expression is false (not true) again.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S8.	S8 Activate / Reset output	Via menu S8, loop unit output, control unit output and expansion board output can be activated and reset.
"↲"	Activate Loop unit 000000 output 0 Change type of output	Use the soft key "Change type of output" to toggle between: **Loop unit output** **Control unit output** (S0-S3 & R0-R1) **Exp. board output.** Write loop unit technical number and output number and press "↲" to activate, which will be indicated with "√" and a beep. Output will be shown in the Reset list
Write loop unit technical number and output (e.g. 000001, 0). "↲"	Activate Loop unit 000000 output 0 √ -- Reset list (1) ---------- Loop unit 000001 output 0	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Reset list**.

"→|"	-- Activate ---------- Loop unit _ _ _ _ _ _ output _ Reset list (1) Loop unit 000001 output 0 	Select in the Reset list with "▼" (in this example there is only one output) and press "↲". The reset output will disappear from the list, indicated with a beep.
"↲"	Activate Loop unit 000000 output 0 	Continue as above or press "ESC".
"ESC"	S8 Activate / Reset output	Scroll to another menu or press "ESC".

32 Interlocking outputs and inputs (H9)

32.1 Activated interlocking outputs / inputs (H9/C1)

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
"↲"	C1 Activated interlocking outputs / inputs	Activated interlocking outputs and inputs can be listed in menu C1.
"↲" Depending on activated outputs, and/or inputs, the following will be shown:	Interlocking area AAA point PP output active User definable text message (if programmed) dd-mm-yyyy hh:mm Interlocking area AAA point PP input/output active User definable text message (if programmed) dd-mm-yyyy hh:mm Interlocking area AAA point PP input active User definable text message (if programmed) dd-mm-yyyy hh:mm 3 of 5 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	C1 Activated interlocking outputs / inputs	Scroll to another menu or press "ESC".

32.2 Activate / deactivate interlocking output (H9/C2)

The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression.

The output in each interlocking combination (area / point) can be manually deactivated via this menu.

***NOTE:** The output will also be deactivated if its control expression is still true and cannot be activated again until the control expression has been false again. Also a latched output will be deactivated.*

If an interlocking output is activated via its control expression and with latching output selected (in EBLWin), the output **has to** be deactivated via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C2.	C2 Activate / deactivate interlocking output	
"↲"	Activate Interlocking output area: 000 point: 00	Write area number and address and press "↲" to activate, which will be indicated with "√" and a beep. The output will directly be shown in the Deactivate list.
Write the area number and point (e.g. 001 and 01. "↲"	Activate Interlocking output area: 001 point: 01 √ -- Deactivate list (1) ---------- Interlocking output area: 001 point: 01 →|	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Deactivate list**.

"→|"	-- Activate ---------- Interlocking output area: _ _ _ point: _ _ Deactivate list (1) Interlocking output area: 001 point: 01 	Select in the Deactivate list with "▼" (in this example there is only one output) and press "↲". The deactivated output will disappear from the list, indicated with a beep.
"↲"	Activate Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C2 Activate / deactivate interlocking output	Scroll to another menu or press "ESC".

32.3 Disable / re-enable interlocking output (H9/C3)

Interlocking outputs (Type = Interlocking) can be individually disabled via this menu (and collectively via menu H2/B3).

The "Interlocking Combination" (Area / Point) is to be entered to disable the output. Up to 100 interlocking outputs can be disabled in the whole system.

Disabled interlocking outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

The LED **Fault / Disablements** "General disablements" (L10) is also indicating one or more disabled interlocking outputs.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C3	C3 Disable / re-enable interlocking output	Interlocking outputs can be disabled / re-enabled via menu C3.
"↲"	Disable Interlocking output area: 000 point: 00	Write area number and address and press "↲" to disable, which will be indicated with "√" and a beep. The output will be automatically shown in the Re-enable list.
Write the area number and point (e.g. 001 and 01). "↲"	Disable Interlocking output area: 001 point: 01 √ -- Re-enable list (1) ---------- Interlocking output area: 001 point: 01 	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	-- Disable ---------- Interlocking output area: _ _ _ point: _ _ Re-enable list (1) Interlocking output area: 001 point: 01	Select in the Re-enable list with "▼" (in this example there is only one output) and press "↲". The re-enabled output will disappear from the

		list, indicated with a beep.
"↲"	Disable Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C3 Disable / re-enable interlocking output	Scroll to another menu or press "ESC".

32.4 Change password (H10)

For security reasons, the default password should be changed.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 94.
Scroll to menu H10.	H10 Change password	
"↲"		
"↲"	Log in name Password: ▮ New password: Verify:	
Enter the old password, the new password and again the new password.	Log in name Password: ****** New password: ****** Verify: ******	The six digits are replaced by ****** in the display.
	Incorrect password, NO change or Password changed	
"ESC"	▒▒ menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change password Escape menu	The password is now changed to the new one. Scroll to another menu or press "ESC" or "Escape menu".

As long as you don't close the door you can enter the menu system again without a password.

NOTE: *After change of password, it is recommended to do a "Safe shutdown of the control unit" (see menu H8/S5). This will save the SSW data (e.g. the new password) in a Flash ROM (see page143).*

If the valid password(s) are unknown, EBLWin has to be used to change the password(s).

33 Maintenance

The C.I.E. shall be maintained and tested according to the Australian standard AS1851.

To avoid the Fault TX output(s) to be activated, they can be disabled via menu H2/B5 (or via an open door, see chapter "Open door" page 44.

Regarding the fault condition, see chapters "Fault", page 61 and "Fault messages", page 63.

NOTE: *Most of the faults have approximately 60 seconds delay.*

Each control unit should be tested as follows:

- Perform monthly / quarterly / yearly test (menu H1).
- Remove one battery fuse (e.g. F2 on the Main board 5010). The following fault message is to be shown:

> FAULT: Battery not connected CU xx
> NOTE! xx is depending on control unit (xx=00-29).

- Re-place the fuse and acknowledge the fault (menu H6).
- Remove fuse F4 on the Main board 5010.
  The following fault message is to be shown:

> FAULT: Supervised output 0, CU xx
> NOTE! xx is depending on control unit (xx=00-29).

- Re-place the fuse and acknowledge the fault.
- Check the manual call points on the panel door. Take required measures. Use the manual call point test key to activate fire alarm.
- Check some control outputs. Are they activated according to programmed control expressions?

33.1 How to change paper in the printer

When the paper roll is almost empty, a red line appears on one edge of the paper. Change the paper roll before it is completely empty! Always have a spare paper roll on site (paper width 58 mm).

Change the paper roll as follows:

- Read all instructions before changing the paper roll.
- Open the control unit acrylic door.
- Open the printer cover, i.e. press the green illuminated release button (in the middle) on top of the printer front.
- Remove the remainder of the old paper roll.

- Place the new paper roll in the printer. Make sure the paper rolls in the proper direction – same as the old one.
- Pull out 50 mm paper and close the cover.
- Tear off the paper, then press the Paper feed button (to the right) on top of the printer front, to check the paper feed function and tear off the paper.
- Close the control unit door.

33.2 Replacing a TLON connection board and/or the Main board

In a TLON network programming, some unique data is stored in a memory on the 5090 TLON connection board and some stored in a memory on the 5010 main board.

Replacing a TLON connection board 5090

After replacing the board:
In TLON Manager version 1.2 do "Replace", "Update" and "Save".
In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is automatically done).

Replacing a TLON connection board 5090 and also the Main board 5010

After replacing the boards:
In TLON Manager version 1.2 do "Replace", "Update" and "Save".
In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is automatically done).

Replacing the Main board 5010

After replacing the main board, replace the TLON connection board(s) in the same position as on the replaced main board:
In TLON Manager version 1.2 do "Update" and "Save".
In TLON Manager version 2.0 do "Update" ("Save" is aut. done).

33.3 Battery maintenance

The batteries 2 x 12 V, 12/17/24 Ah are placed inside the control unit. Larger batteries can be placed in a separate battery cabinet.

The control unit supervises and charges the batteries and a fault will be generated for any fault with the batteries.

The batteries are rechargeable Sealed Lead-Acid batteries, it must be CSIRO approved batteries. The batteries are normally maintenance-free but the manufacturer's instructions should always be followed.

The ambient temperature affects the battery's capacity, self-discharge and life span. The temperature should preferably not be higher than normal room temperature (approx. 20-22°C).

For the highest safety reason, the batteries used in a fire alarm installation should not be more than four years old.

CAUTION
Risk of explosion may occur if batteries are replaced by incorrect type.

34 How to avoid nuisance fire alarms

We all realise when life, buildings, production facilities, etc. should be protected, it is of utmost importance that an initial fire is detected as soon as possible. That's why more reliable automatic fire alarm systems are installed.

In an automatic fire alarm installation, especially if smoke detectors (sensors) are used, everybody in the building needs to be informed how to avoid nuisance fire alarms.

To avoid troubles and unnecessary expenses there are a couple of things to bear in mind. Here are some advice and tips.

Tobacco smoke

The detectors (sensors) cannot sense the difference between "smoke" and "smoke". They cannot separate tobacco smoke from smoke from a fire. Intensive tobacco smoking in conjunction with bad ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling

These kind of jobs cause smoke.

Carpet welding

Welding of plastic carpets causes a smoke that can be almost invisible, but it still influences the smoke detectors (sensors).

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc.

Warning: Be careful when smoke detectors (sensors) are mounted near / close to such activities.

Special environments

In certain premises a special environment can exist, which can influence smoke detectors (sensors) and cause alarm. It can be ions (from plastics), flour dust, oil haze, aerosols, strong perfumes, strong ventilation, insecticides, disinfecting sprays, etc. If many odd and unnecessary alarms occur, the environment must be examined and perhaps other detector types have to be chosen.

Steam / hot air

Smoke and heat detectors are influenced by steam and hot air, e.g. from an oven, dry-blower, heater, etc.

Exhausts

Exhausts from cars / trucks, lift trucks, lawn mowers, etc. influences smoke detectors (sensors). If windows and doors are open, exhausts can "slip in" that way.

Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an analogue system (like FT1020G3) a Service signal is given when it is time to exchange the smoke detectors (sensors) to new ones. The alternative is to exchange detectors at given periods, to be on the safe side.

Change in activities or wrong choice of detector

If the activities in the premises are altered, the detector choice may also need to be altered. Due to special environments, see above, an in-appropriate detector type may have been chosen from the beginning and thus cause nuisance alarms.

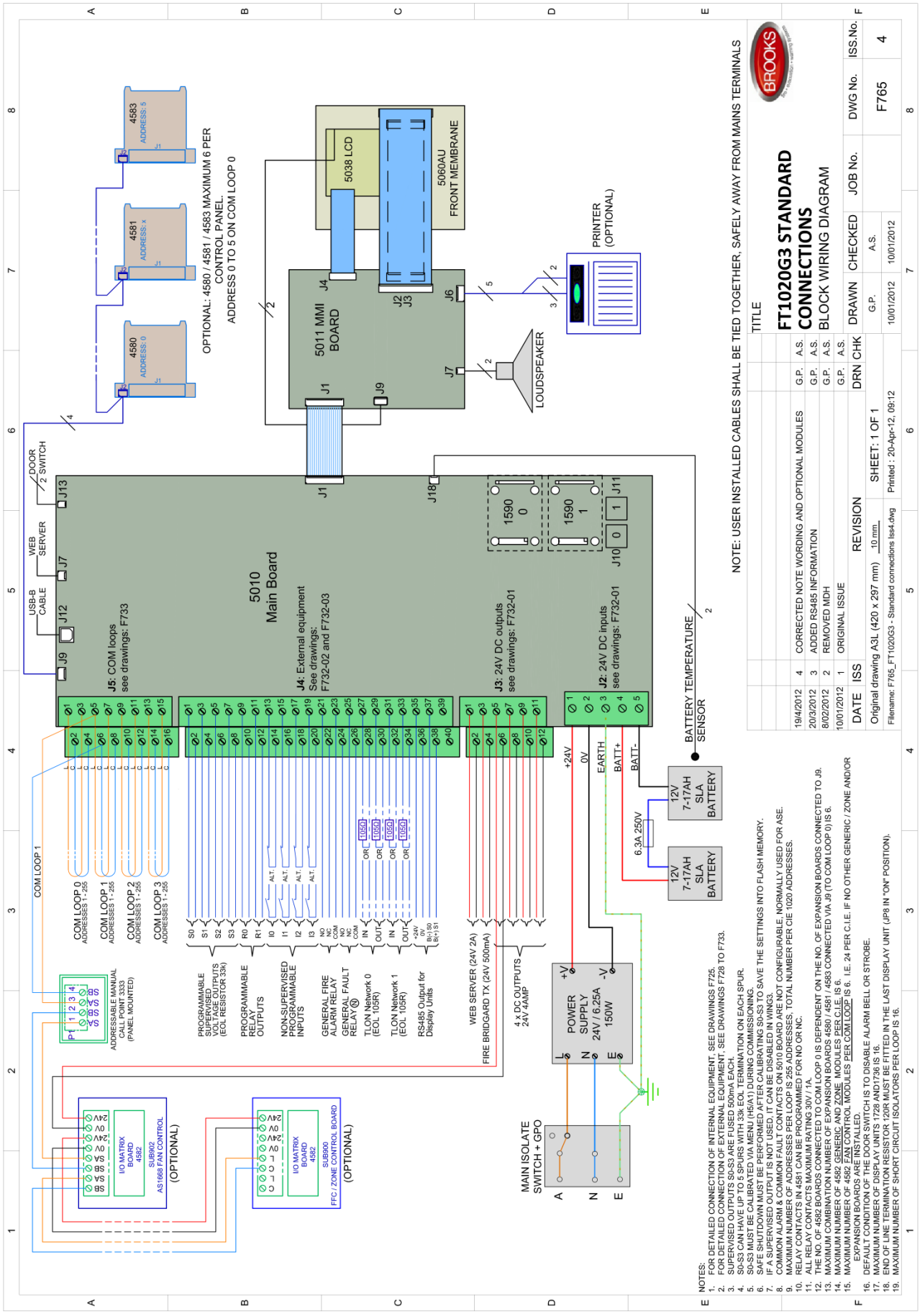
Miscellaneous

Choosing another type of detector can solve certain problems. Bear also in mind, that the coverage area can be different for different types of detectors.

It is however not always the best action is to change detector type. Here is a list of other actions, programmed via EBLWin, which can be used:

- Another alarm algorithm can be used (e.g. during working hours).
- Alarm delay or AVF for smoke sensors / detectors can be used.
- Two-zone or two-unit dependent (co-incidence) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. FT1020G3), the affected detectors can be individually disabled (or whole zones) for temporary work in the premises. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors / zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2/B1-B2). Automatic re-enabling can be used.
- If there is an alarm organisation for the personnel on site, the alert annunciation function can be used.
- Pre-warning can be used as information before a fire alarm is activated.

35 Block Wiring Diagram



36 Guarantee

If the product has any defect due to faulty workmanship or material it is to be returned to Brooks freight paid. Brooks will, at its sole discretion, repair or replace the item free of charge.

On returning a component or complete product, proof of purchase will be required. If returning the complete product all accessories and documentation MUST be returned.

This guarantee does not cover damage caused to the product or its components as a result of incorrect installation, accident, negligence, misuse, unauthorised dismantling or contamination howsoever caused, careless handling or where repairs have been made or attempted by others. Onsite warranty repairs will be carried out at the discretion of the manufacturer.

No other guarantees written or verbal are authorised to be made on behalf of Brooks. All other conditions and warranties whether expressed or implied are, to the extent permitted by law, hereby excluded.

As Brooks has no control over the system's design, installation to the relevant Australian Standard or maintenance, the Company and its agents take no responsibility for any damage, consequential loss or injury caused to any equipment, property or persons resulting from the use of FT1020G3.

Brooks guarantees FT1020G3 for a period of three years from the date of purchase the equipment.

37 Revision history

Issue	Date	Description	Written By	Checked By
Panasonic	11/06/10	Original Panasonic manual	J. Pattersson	
Rev 1	4/01/2012	Update the original MEW01351 Rev 1 document to suit AU & NZ market	A. Shenouda	E.T. / A.S.
Rev 1.1	20/04/2012	Update drawing F765 to Issue 4	Edwin Thein	A.S.
Rev 2.0	22/02/2013	Update for S/W V2.0.0	A. Shenouda	C. Orr

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